

AD/A-002 868

A STRUCTURAL WEIGHT ESTIMATION PROGRAM  
(SWEEP) FOR AIRCRAFT. VOLUME VII -  
FUSELAGE MODULE. APPENDIX A: MODULE  
FLOW CHARTS AND FORTRAN LISTS. APPENDIX B:  
FUSELAGE MODULE SAMPLE OUTPUT

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Aeronautical Systems Division

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Three computer programs were written with the objective of predicting the structural weight of aircraft through analytical methods. The first program, the structural weight estimation program (SWEEP), is a completely integrated program including routines for airloads, loads spectra, skin tem- peratures, material properties, flutter stiffness requirements, fatigue life, structural sizing, and for weight estimation of each of the major aircraft structural components. The program produces first-order weight estimates		

and indicates trends when parameters are varied. Fighters, bombers, and cargo aircraft can be analyzed by the program. The program operates within 100,000 octal units on the Control Data Corporation 6600 computer. Two stand-alone programs operating within 100,000 octal units were also developed to provide optional data sources for SWEEP. These include (1) the flexible airloads program to assess the effects of flexibility on lifting surface airloads, and (2) the flutter optimization program to optimize the stiffness distribution required for lifting surface flutter prevention.

The final report is composed of 11 volumes. This volume (volume VII)<sup>7</sup> contains the methodology, program description, and user's information for the fuselage module of SWEEP.



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Subroutine GJ2GEO	800
Subroutine I1LONG	800
Subroutine I2LONG	802
Subroutine LDCHK	803
Subroutine LONGS	804
Subroutine MINFR	806
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## APPENDIX A

### MODULE FLOW CHARTS AND FORTRAN LISTS

#### FLOW CHART USAGE

The automatically generated computer program flow charts (AUTOFLOW) presented in this document include a table of contents, flow charts, and FORTRAN lists of all routines in the module. The 80-column card lists are sequenced and grouped by routine.

Because the AUTOFLOW system used is IBM-oriented, the functions of the BUFFERIN and BUFFEROUT statements are not recognized, but these statements appear in proper order in note boxes. Also, the PROGRAM name does not appear on the main program, and library routines READMS and WRITMS are listed as undefined external references.

#### CROSS-REFERENCE LIST

The AUTOFLOW table of contents which precedes the flow charts and FORTRAN lists serves to cross reference the latter two. This table lists the following from left to right:

- The card identification from columns 73 through 80 of this card, or card sequence number. When sequence number is used in place of card identification, it is enclosed in parentheses.
- The page and box number where this card is displayed in a flow chart.
- The FORTRAN statement number from columns 1 through 5 of this card.
- The card identification(s) or sequence number(s) of the card(s) referring to this card (repeated as required).
- The pages and box numbers where the cards referring to this card are displayed in a flow chart (repeated as required).

#### FLOW CHARTS

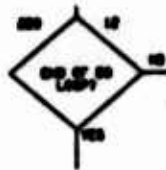
The flow charts produced by AUTOFLOW use USASI conventional symbols. Since the flow charts are mechanically drawn from the program source deck, there are no omissions or vague generalizations about the processing within the boxes.



Every box on each page is uniquely numbered and may be referred to from elsewhere in the program. The source of a reference to a box will be indicated by showing the page and box number. If the number is followed by an asterisk, there are multiple references to this point, and the others may be found by using the cross-reference list.



The most-often-used symbol is the decision box. Like all boxes, its box number is above and to the right of the box. Its FORTRAN statement number is above and to the left of the box. The decision choices for the paths are printed.



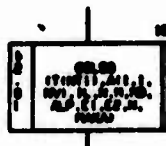
The unconditional transfer connector has its page number destination printed above or to the left of the box number destination within the connector. If there is a FORTRAN statement number at the destination, it is printed below the connector.



The exit box example shows a connector from page 9, box 15.



The subroutine call box includes the calling sequence. The page and box numbers of the flow chart of the called subroutine are shown on the left-hand side of the box. The page number is above the box number.



The note box encloses comments of a functional nature,



as differentiated from the 21 column comments, which are left justified without a box, that show the comment cards included in the FORTRAN deck.

```

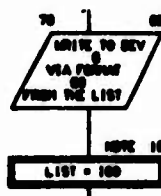
----- (000)
CALL SUB PROGRAM
APPA, B1 040, B1
CONE, B1
OPERATION
CONE, B1, 040, B1
CONE, B1
----- (000)
CALL SUB PROGRAM
APPA, B1 040, B1
CONE, B1
OPERATION
CONE, B1, 040, B1
CONE, B1

```

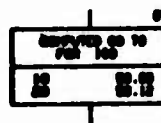
The process box is used to enclose FORTRAN arithmetic statements.



Input and output are shown as communicating with a device. The list used follows, if appropriate:



The computed GO TO becomes a branch table showing the page and box number of each of the ordered branches.



The column connectors and initial connectors are the only boxes without external box numbers. The function of the initial connector is always clear,

but the label given is the symbol in the next FORTRAN card, which is often blank.



The column connector identifies the page and box number to which it connects.



PROGRAM TABLE OF CONTENTS AND REFERENCES  
OF  
FIRST FUSELAGE OVERLAY

FORTRAN MODULE FIRST FUELAGE OVERLAY

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000020)	2.04 10	(000027)	2.03	(000027)	2.03
(000021)	2.05	(000028)	2.08		
(000022)	2.06 10				
(000044)	2.10	(000040)	2.13		
(000045)	2.11 41				
(000046)	2.12 42				
(000048)	2.13 40	(000044)	2.10	(000048)	2.11
(000050)	2.14 43	(000047)	2.12		
(000051)	2.17 45	(000053)	2.16		
(000052)	2.01 47	(000053)	2.16		
(000054)	2.02 48	(000058)	2.01		
(000057)	2.03 49	(000058)	2.17	(000058)	2.01
(000059)	2.05 2	(000059)	2.04	(000059)	2.04
(000070)	2.06 3	(000059)	2.04	(000059)	2.04
(000075)	2.10 12	(000059)	2.07		
(000082)	2.15 20	(000059)	2.14	(000059)	2.14

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SUBFW1

(000001)	0.01 SUBFW1	(000170)	03.14-X		
(000120)	0.02	(000120)	0.03		
(000120)	0.03 10				
(000120)	0.05	(000120)	0.06		
(000120)	0.06 20				
(000140)	0.13	(000140)	0.14		
(000140)	0.14 30				
(000150)	0.16 40	(000150)	0.17	(000150)	0.17
(000150)	0.18 50	(000150)	0.17		
(000153)	0.20 55	(000150)	0.18		
(000155)	0.21 60	(000150)	0.17	(000155)	0.17
(000171)	0.24 100	(000155)	0.17	(000155)	0.20
(000172)	0.25 200				
(000182)	0.27 300	(000171)	0.24		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FUEL0

(000100)	0.01 FUEL0	(000020)	05.02-X		
(000230)	0.03	(000237)	0.04		
(000237)	0.04 4				
(000240)	0.07 5				
(000244)	0.08 12				
(000245)	0.10 14	(000243)	0.09		
(000250)	0.11 5	(000252)	0.12	(000310)	10.20
(000251)	0.12 7				
(000252)	0.13 8	(000250)	0.11		
(000255)	0.15 9				
(000257)	0.16 10	(000254)	0.14	(000255)	0.10
(000257)	0.18	(000255)	0.16		
(000259)	0.19 11				
(000260)	0.20 15	(000257)	0.16		
(000261)	0.21 16				
(000263)	0.23 17				
(000265)	0.24 18	(000260)	0.20	(000262)	0.22
(000271)	0.26	(000274)	0.27		
(000274)	0.27 20				

CH/BS/PA		TABLE OF CONTENTS AND REFERENCES		AUTOFLEX CHART SET - BEEP		PAGE 2	
CARD NO	PAGE/BSN	NAME		REFERENCES	(SOURCE SEQUENCE NO. AND PAGE/BSN)		
(000077)	9.30		(000000)	10.01			
(000000)	10.01 30						
(000000)	10.04		(000000)	10.05			
(000000)	10.05 41						
(000000)	10.05		(000000)	10.05			
(000000)	10.05 42						
(000000)	10.10		(000007)	10.13			
(000007)	10.13 01						
(000000)	10.15 000		(000000)	9.05	(000000)	10.14	
(000000)	10.15 001						
(000000)	10.17 002		(000004)	10.18			
(000000)	10.18 003						
(000017)	10.19 000		(000000)	10.14	(000000)	10.15	
(000000)	10.21 004		(000000)	10.17			
(000007)	10.24		(000000)	10.20			
(000010)	10.25 005						
(000011)	10.27 006		(000000)	10.25			
(000015)	10.30		(000014)	10.28			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FTYPE

(000070)	13.01 30		(000004)	14.07			
(000000)	13.03 FTYPE		(000074)	14.11-12			
(000000)	13.05		(000000)	13.05			
(000000)	13.05 10						
(000070)	13.10		(000074)	13.11			
(000074)	13.11 00						
(000077)	13.13 00		(000070)	13.02			
(000000)	13.14 01		(000077)	13.13			
(000004)	13.15 00						
(000000)	13.17		(000000)	13.01			
(000000)	13.18 41						
(000000)	13.20 42						
(000000)	13.21 43		(000000)	13.17			
(000411)	14.01 70		(000410)	14.04	(000404)	15.03	
(000410)	14.03 74						
(000417)	14.04 77						
(000000)	14.05 43		(000000)	13.10			
(000000)	14.05 45		(000000)	13.15	(000000)	13.01	
(000000)	14.05 50		(000070)	13.02			
(000000)	14.11		(000404)	15.07			
(000000)	14.12		(000400)	15.04			
(000400)	14.15 71						
(000400)	14.15 80		(000410)	14.03	(000404)	14.15	(000400) 15.01 (000401) 15.02
(000400)	14.15 101		(000411)	14.23	(000407)	14.25	
(000407)	14.23 102						
(000402)	14.24 110		(000400)	14.02			
(000403)	14.25 111						
(000400)	15.01 70		(000410)	14.02			
(000401)	15.02 70						
(000402)	15.03 00						
(000400)	15.04 100		(000400)	14.04			
(000402)	15.05 010		(000400)	15.05			
(000400)	15.05 011		(000400)	15.05			
(000407)	15.05 020		(000400)	15.07			
(000402)	15.11 0001						
(000407)	15.15		(000477)	15.23			
(000470)	15.19		(000470)	15.22			
(000470)	15.22 00						
(000477)	15.23 01						
(000470)	15.24 0002		(000400)	15.10			
(000401)	15.27 00						
(000402)	15.01 01		(000400)	15.25			
(000404)	15.02 02		(000400)	15.07			
(000404)	15.07 000						
(000400)	15.10 0000						
(000000)	15.14 0004		(000407)	15.00			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FL007

(000047)	10.01	FL007	(001700)	00.10-X		
(000000)	10.02		(000070)	10.03		
(000070)	10.03	0				
(000000)	10.05	20	(000000)	10.05		
(000002)	10.07	10	(000000)	10.05		
(000007)	10.08	100	(000000)	10.05	(000001)	00.01
(000001)	00.01	14	(000000)	10.05		
(000000)	00.02	00	(000000)	10.10	(000001)	00.01
(000000)	00.03	00	(000000)	00.02		
(000000)	00.05	01	(000000)	00.02		
(000007)	01.01	40	(000000)	10.05		
(000000)	01.02	41				
(000010)	01.03	42	(000007)	01.01		
(000011)	01.04	43				
(000015)	01.05	44	(000010)	01.03		
(000002)	01.06	00	(000004)	00.04	(000000)	00.00
(000010)	01.10	02	(000002)	01.00		
(000030)	01.11	00	(000000)	01.10		
(000045)	01.13	70	(000000)	10.00	(000007)	00.01
(000000)	01.15	70	(000047)	01.14	(000000)	00.00
(000004)	02.01	01	(000000)	01.00		
(000031)	02.02	03	(000000)	01.10		
(000040)	02.04	71	(000047)	01.14		
(000000)	02.06	72	(000007)	02.00		
(000000)	03.01	70	(000000)	01.00		
(000702)	03.14	00	(000000)	01.00	(000007)	00.00
(000700)	03.17	00	(000700)	03.10	(000000)	00.17
(000707)	03.02	03	(000700)	03.01		
(000711)	04.01	01	(000700)	03.10		
(000777)	04.03	04	(000700)	03.01		
(000702)	04.05	00	(000700)	03.01	(000700)	03.07
(000703)	04.06	01			(000700)	04.00
(000700)	04.13	00	(000707)	04.12		
(000011)	05.01	00	(000707)	04.12		
(000014)	05.02	100	(000702)	04.00	(000707)	04.12
(000010)	05.03	101			(000000)	04.10
(000000)	05.10	110	(000014)	00.02		
(000000)	05.11	111				
(000000)	05.10	120	(000030)	05.10		
(000000)	05.10	121				
(000007)	05.00		(000000)	00.01		
(000000)	05.01	102				
(000000)	05.02	124	(000000)	05.10		
(000001)	05.03	125	(000000)	05.01		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FL010

(000070)	00.01	FL010	(001717)	00.10-X		
(000000)	00.02		(000000)	00.10		
(000001)	00.04	10				
(000002)	00.05		(000007)	00.00		
(000000)	00.06	12				
(000000)	00.08	14				
(000007)	00.09	10	(000001)	00.00	(000004)	00.07
(000000)	00.10	00	(000000)	00.00		
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SHIRT TITLE - NON-FRONTAL STATEMENTS

SHIRT TITLE - INTRODUCTORY COMMENTS

SHIRT TITLE - SUBROUTINE FLOW

00000004 24.01 FLOW

00000005 20.02-2

00000006 24.02

00000007 24.03

00000008 24.03 10

00000009 24.03

00000010 24.07

00000011 24.07 20

00000012 24.11

00000013 24.13

00000014 24.13 20

SHIRT TITLE - NON-FRONTAL STATEMENTS

SHIRT TITLE - INTRODUCTORY COMMENTS

SHIRT TITLE - SUBROUTINE FLOW

00010001 24.01 FLOW

00010002 20.10-2

00010003 24.07 2

00010004 24.08 4

00010005 24.08

00010006 24.08 6

00010007 24.07

00010008 24.10

00010009 24.08

00010010 24.17 20

00010011 24.10

00010012 24.10 10

00010013 24.10 11

00010014 24.17

00010015 24.08 20

00010016 24.10

00010017 24.02

00010018 20.02

00010019 24.08 01

00010020 24.04

00010021 20.01 05

00010022 24.04

00010023 20.04 07

00010024 24.08

00010025 20.07

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00010027 20.08

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00010030 20.11

00010031 20.13 05

00010032 20.11

00010033 20.15 02

00010034 20.14

00010035 20.01 04

00010036 20.14

00010037 20.02 05

00010038 20.01

00010039 20.02 06

00010040 20.01

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00010043 20.02

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00010045 20.13

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00010047 20.14 74

00010048 20.08

00010049 20.17

00010050 20.15

00010051 20.10 70

00010052 20.04

00010053 20.08

00010054 20.13

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00010056 20.10

00010057 20.02

00010058 20.01 70

00010059 20.02 00

00010060 24.04

00010061 20.08

SHIRT TITLE - NON-FRONTAL STATEMENTS

SHIRT TITLE - INTRODUCTORY COMMENTS

SHIRT TITLE - SUBROUTINE FLOW

00010062 20.01 FLOW

00010063 10.00-2

00010064 20.02

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00010066 20.08 1

00010067 20.08

00010068 20.08

00010069 20.08 05

00010070 20.11

00010071 20.10

00010072 20.10 02

00010073 20.14

00010074 20.10

00010075 20.10 01



[illegible]

## COUNT TITLE - NON-PROFICIAL STUDENTS

**COURT TITLE - INTRODUCTORY COMMENTS**

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(001409)	95.15	000	(001405)	95.07	(001406)	95.08

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1001482	40.27 402	
1001483	40.28	
1001484	40.31 403	
1001485	40.32	
1001486	40.33 500	
1001487	40.37 5001	
1001488	40.43 5002	

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1001472	40.23
1001473	40.23
1001482	40.27
1001483	40.28
1001484	40.31
1001485	40.32
1001486	40.33
1001487	40.37
1001488	40.43

GUNSET TITLE - NEW-PROCESSED STATEMENTS

GUNSET TITLE - INTRODUCTORY COMMENTS

GUNSET TITLE - SUMMARY OF FINDINGS

1001510 40.01 FINDINGS 1001510 10.00-1

GUNSET TITLE - NEW-PROCESSED STATEMENTS

GUNSET TITLE - INTRODUCTORY COMMENTS

GUNSET TITLE - SUMMARY OF FINDINGS

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1001584	02.11 5004	1001587	01.12
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1001592	02.25 502	1001587	01.12
1001593	02.27 504	1001587	01.12
1001594	02.01 505	1001587	01.12
1001595	02.02 506	1001587	01.12
1001596	02.03 507	1001587	01.12
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GUNSET TITLE - NEW-PROCESSED STATEMENTS

GUNSET TITLE - INTRODUCTORY COMMENTS

GUNSET TITLE - SUMMARY OF FINDINGS

1001700	03.01 GUNSET	1001700	3.00-1
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE DEEP2

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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE DEPT2

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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PARL

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(000110)	72.04 102		
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OWN TITLE - INTERMEDIATE STATEMENTS

OWN TITLE - ADVANCED STATEMENTS

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0000347	70.10	292	0000348	70.10	
0000348	70.10	293	0000349	70.10	
0000349	70.10	294	0000350	70.10	
0000350	70.10	295	0000351	70.10	
0000351	70.10	296			

CHART TITLE - SUBROUTINE WFOHL

(002307)	00.02	110	(002308)	00.17
(002310)	00.04	124	(002309)	00.24
(002373)	00.05	126		
(002304)	00.06	107	(002370)	00.04
(002306)	00.10	WFOHL	(001700)	00.10-X
(002303)	00.12		(002401)	01.10
(002304)	00.13	10		
(002305)	00.14	11	(002300)	00.25
(002307)	00.16	112	(002306)	00.21
(002308)	00.17	113		
(002309)	00.18	114	(002300)	00.10
(002304)	00.20	12	(002303)	00.12
(002305)	00.21	10		
(002307)	00.22	14	(002304)	00.13
(002308)	00.23	201		
(002309)	00.24	202		
(002304)	01.01	00	(002305)	00.00
(002305)	01.03		(002306)	01.04
(002306)	01.04	21		
(002307)	01.05	30		
(002308)	01.07	0001		
(002400)	01.09	0002	(002307)	01.05
(002401)	01.10	100	(002308)	01.06
(002402)	01.11	200	(002307)	00.22
(002407)	01.15	0003		
(002412)	01.19		(002415)	01.22
(002419)	01.22	04		
(002410)	01.23	0004	(002405)	01.04

CHART TITLE - NEW-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SCRIT

(002400)	04.01	SCRIT	(001725)	00.01-X	(001770)	04.13-X
(002403)	04.03	2				
(002407)	04.04	4				
(002408)	04.05	5	(002405)	04.05		
(002409)	04.07	6	(002406)	04.06		
(002404)	04.09	7	(002408)	04.07		
(002400)	05.01	8	(002402)	04.07		
(002400)	05.02	10	(002405)	04.02	(002401)	04.05
(002401)	05.03	11			(002405)	04.05
(002402)	05.04	12				
(002403)	05.05	15	(002400)	05.02	(002411)	05.03
(002404)	05.06	16				
(002405)	05.07	17	(002403)	05.05		
(002406)	05.08	18				
(002407)	05.09	21	(002405)	04.03	(002405)	05.07
(002408)	05.10	27	(002407)	05.05		
(002409)	05.11	21				
(002471)	05.12	25	(002400)	05.10		
(002473)	05.01	26	(002405)	05.10		
(002475)	05.02	27	(002473)	05.01		
(002476)	07.01	28	(002473)	05.01		
(002401)	07.02	30	(002475)	05.12	(002477)	05.02
(002402)	07.03	40	(002400)	05.11		
(002404)	07.04	41	(002402)	07.03		
(002405)	07.05	40				
(002407)	07.06	40	(002404)	07.04		
(002408)	07.07	47				
(002401)	07.08	40	(002407)	07.05		
(002403)	07.09	40	(002402)	07.05	(002400)	07.05
(002405)	05.01	00	(002405)	07.05	(002400)	07.07
(002400)	05.04	01	(002405)	07.05		
(002500)	05.05	02				
(002500)	05.06	03	(002400)	05.04		
(002507)	05.08	70				

04/02/74 TABLE OF CONTENTS AND REFERENCES

ALFOTLEN CHART SET - SHEEP  
REFERENCES (SOURCE, SOURCE NO. AND PAGE/SEN)

PAGE 10

(000010)	00.11	00	(000001)	07.02	
(000015)	00.13	00	(000002)	00.11	(000003) 00.00 (000004) 00.10

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SPACE

(000005)	01.01	SPACE	(001200)	01.00-X
(000006)	01.02	2		
(000007)	01.03		(000008)	01.04
(000009)	01.04	4		
(000010)	01.05	5	(000011)	01.01
(000012)	01.11		(000013)	01.27
(000014)	01.14	10		
(000016)	01.16	15	(000017)	01.13
(000018)	01.17	20	(000019)	01.15
(000020)	01.18	25		
(000022)	01.19	30	(000023)	01.17
(000024)	01.20	35		
(000026)	01.21	40	(000027)	01.19
(000028)	01.23	45		
(000030)	01.24	50	(000031)	01.20
(000032)	01.25	51		
(000034)	01.27	100	(000035)	01.25
(000037)	01.29	200		
(000041)	01.31		(000042)	01.33
(000044)	01.33	301		
(000046)	01.35	3001		
(000048)	01.40	3002	(000049)	01.35
(000050)	01.41	300	(000051)	01.30

CHART TITLE - NON-PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD NO	PAGE/BOX	
000000	0.00	UNRECORDED SWYAK
000001	0.07	UNDEFINED - 'READS' EXTERNAL REFERENCE
000002	0.10	UNRECORDED SWYAK
000071	10.00	UNDEFINED - 'READS' EXTERNAL REFERENCE
000400	14.10	UNDEFINED - 'READS' EXTERNAL REFERENCE
001000	01.01	UNDEFINED - 'READS' EXTERNAL REFERENCE
001070	01.02	UNDEFINED - 'READS' EXTERNAL REFERENCE
001077	03.10	UNDEFINED - 'WRITES' EXTERNAL REFERENCE
002000	00.00	UNDEFINED - 'READS' EXTERNAL REFERENCE
002401	01.10	UNDEFINED - 'WRITES' EXTERNAL REFERENCE
002000	01.00	UNDEFINED - 'READS' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

O 3

FIRST FUSELAGE OVERLAY



04/05/74

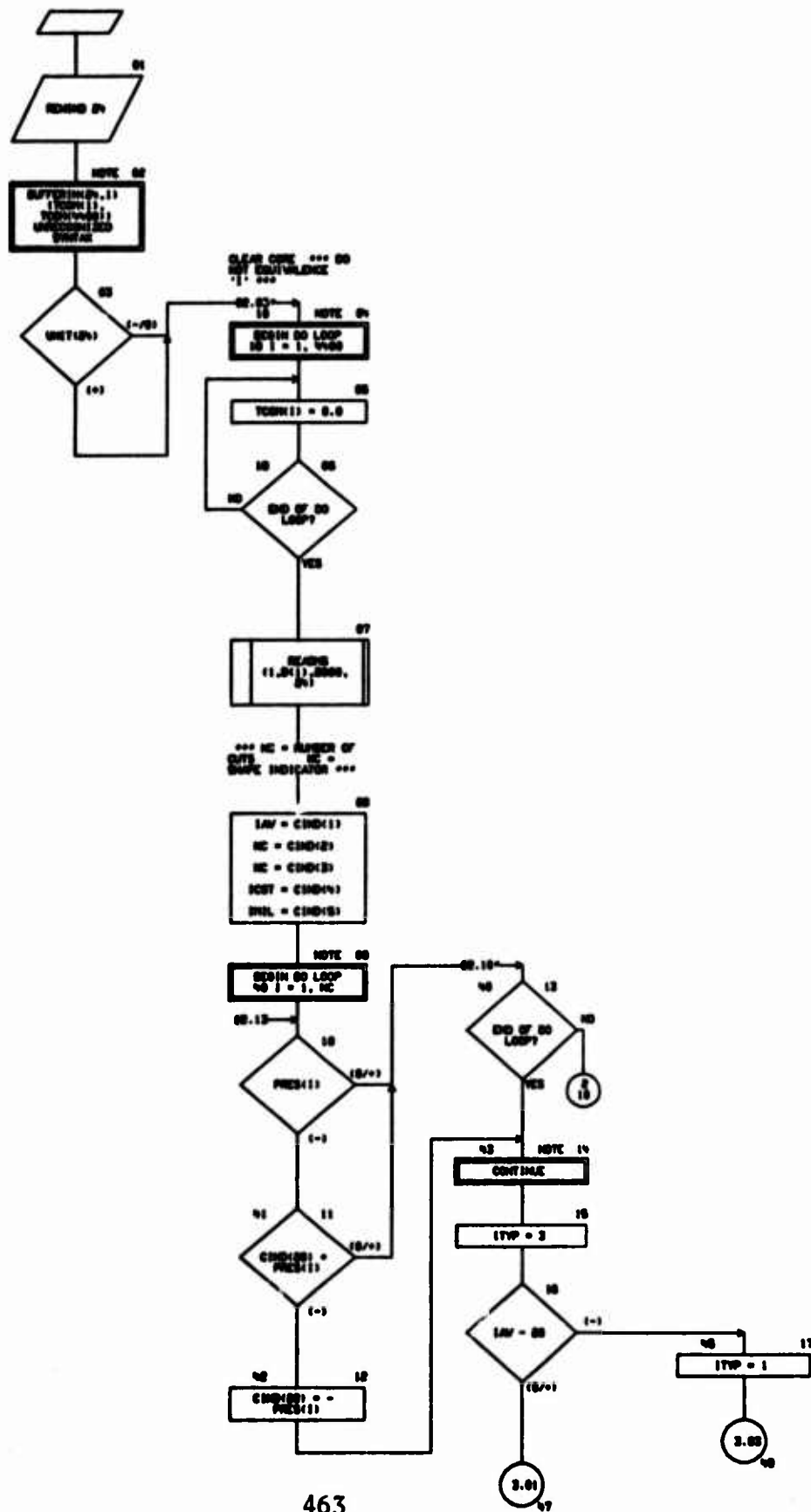
AMPLON CHART SET - SHIP FIRST PUBLAGE OVERLAY

PAGE 01

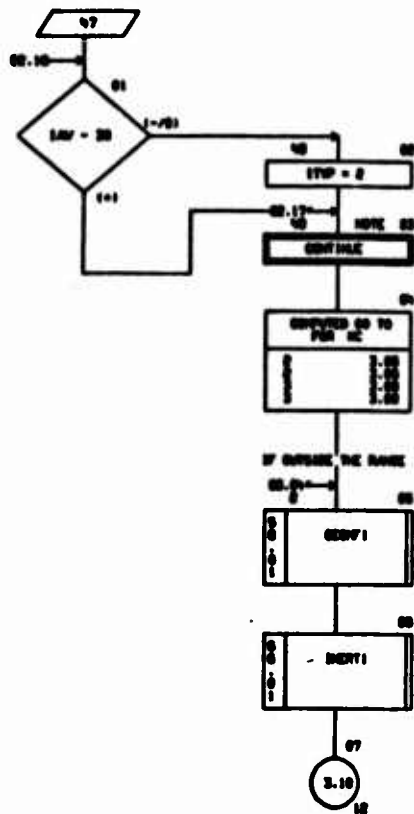
CHART TITLE - INTRODUCTORY COMMENTS

.....  
PROGRAM FUSED  
.....

## CHART TITLE - PROCEDURES



## SHOT TITLE - PROCEDURES



04/08/74

ANALYSIS CHART SET - 0407 FIRST FUELAGE OVERLAY

PAGE 04

CHART TITLE - NON-PROCEDURAL STATEMENTS

```
PROGRAM FUELCH
COMMON TCHN1400
DIMENSION D(2000),T(2000),DC(100),JD(200)
DIMENSION CCHN100
DIMENSION PRES100
EQUIVALENCE (D(1),TCHN(1)),(T(1),TCHN(200)),(DC(1),TCHN(410)),
            (D(1),TCHN(200))
EQUIVALENCE (D(201),CCHN(1))
EQUIVALENCE (D(200),PRES(1))
EQUIVALENCE (D(111),JC), (D(112),JC)
EQUIVALENCE (D(117),LAT), (D(118),LON), (D(119),DML)
EQUIVALENCE (D(127),ITP)
```

ASTORIA GARY SET - BEEP FIRST PURCHASE ONLY PAGE 05

```

=====
                        ROUTINE SHOW
=====

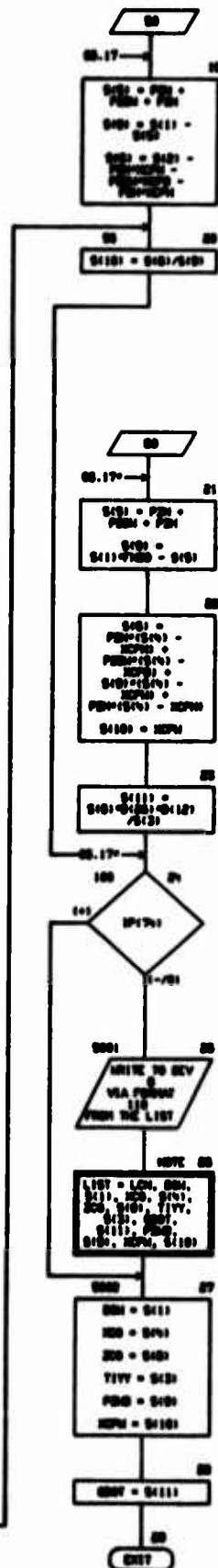
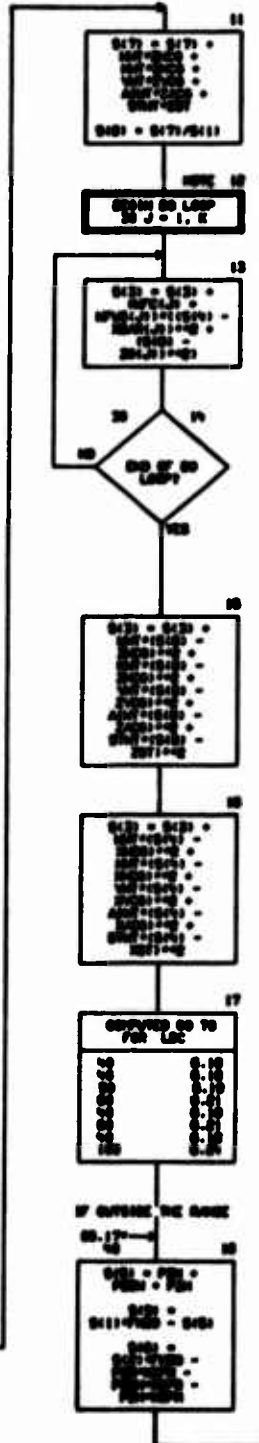
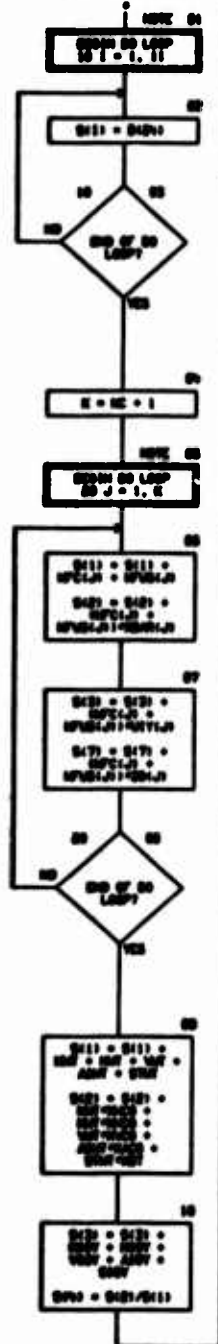
```

SECRET

EX. 17-1

WRITTEN ON NOV 1971  
SUBMITTED TO CHIEF  
OF BUREAU OF  
LAND AND BLVD DESIGN  
BUREAU

READ ME NOW OR  
LATER



SUBTITLE - NEW-PROCEDURE STATEMENTS

```

COMMON TOWH400
COMMON / IPHNT / IP(00)
DIMENSION S(0000),T(0000),JC(100),ND(000)
DIMENSION S(100),NDAR(00),JIV(00)
DIMENSION JET(000)
DIMENSION JFC(00),JFUS(00)
DIMENSION Z0(00)
EQUIVALENCE (S(1),TOWH(1)),(T(1),TOWH(001)),(JC(1),TOWH(101)),
  (ND(1),TOWH(001))
EQUIVALENCE (ND(101),1), (ND(102),J), (ND(103),K), (ND(111),JC)
EQUIVALENCE (ND(113),JFC)
EQUIVALENCE (T(1),S(1)), (T(201),NDAR(1)), (T(1001),JIV(1))
EQUIVALENCE (Z0(1),T(001))
EQUIVALENCE (S(101),000), (S(2100),JCO), (S(02100),TIVY),
  (S(02100),JMT), (S(02100),JCO), (S(02113),JMT),
  (S(02110),JMT), (S(02110),JCO), (S(02100),JMT),
  (S(02100),JMT), (S(02123),JCO), (S(02127),JMT),
  (S(02100),JMT), (S(02130),JCO), (S(02134),JMT),
  (S(02130),JMT), (S(02137),JMT), (S(02141),JMT),
  (S(02101),JFC(1)), (S(02171),JFUS(1))
EQUIVALENCE (S(02104),JCO), (S(02111),JCO), (S(02100),JCO),
  (S(02100),JCO), (S(02120),JCO), (S(02130),JMT)
EQUIVALENCE (JCH,ND(114))
EQUIVALENCE (S(0217),JMT), (S(0210),000),
  (S(0210),JMT), (S(0217),JMT), (S(0210),JMT), (S(0210),JMT),
  (S(0210),JMT), (S(0212),JMT), (S(0212),JMT), (S(0210),JMT)
110 FORMAT (1H,4X,10H,00 CONDITION NO.,113,
  2X,2H** SUPPLY - IP(74) **// 2X,0H,0UT,7X,
  0CORRECTED / 2X,0H,0X,0PULSE,4X,0F10.2 / 2X,0H,0CO.,
  2X,0H,0HES,4X, 0F10.2 / 2X,0H,0CO.,2X,0H,0HES,4X, 0F10.2 /
  2X,0H,0TIVY, 2,0H,0H-ND,2X, 0F10.2 / 2X,0H,0HES, 2,10H,0H,0EC
  00, 0F10.2 / 2X,0H,0P00, 2,0H,0P00, 4X, 0F10.2 / 2X,0H,0CP4, 2,
  0H,0HES, 4X, 0F10.2 )

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01/03/74

ADDITIONAL CHART SET - SHIP FIRST PUBLICATION

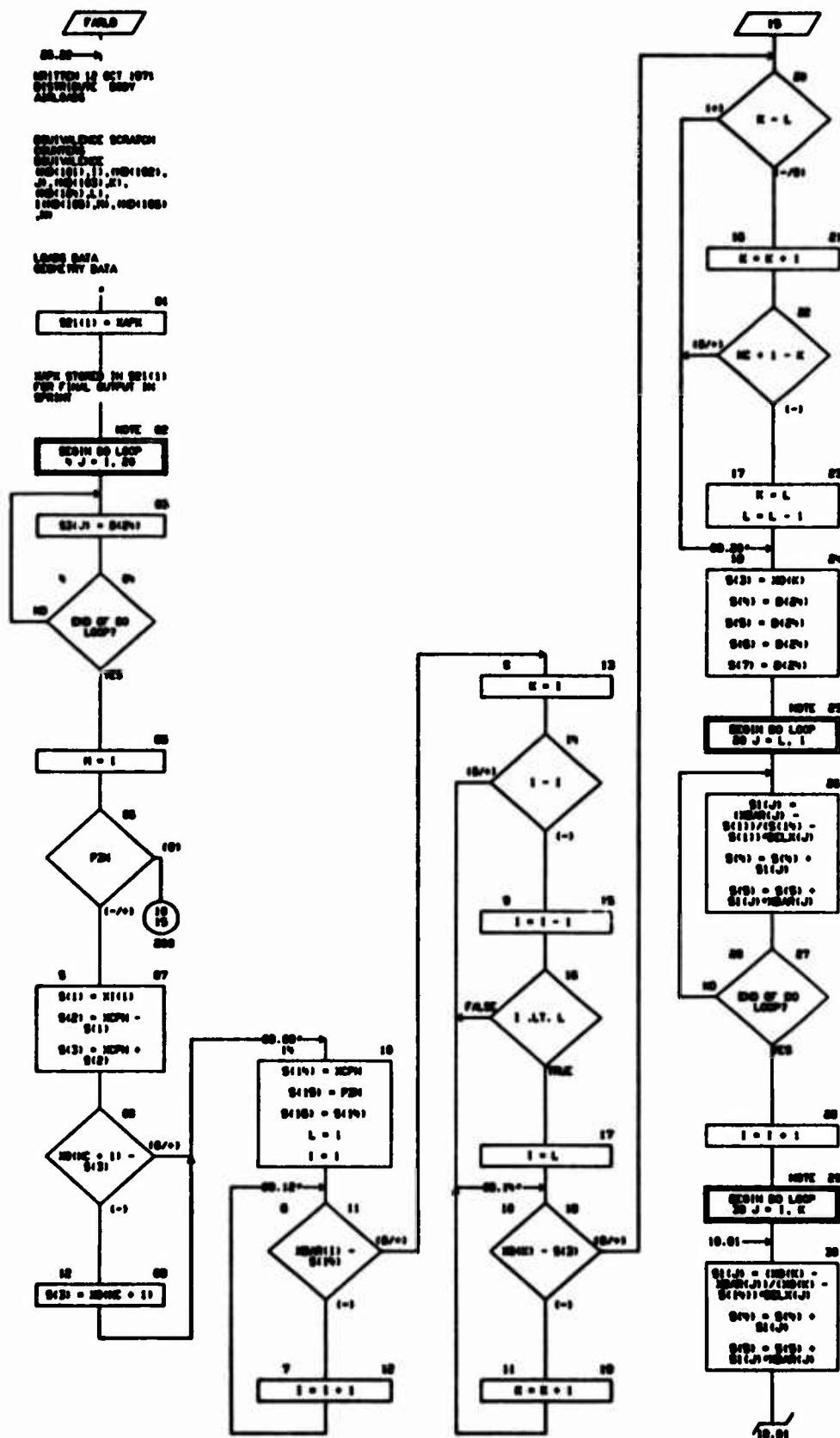
PAGE 00

CHART TITLE - INTERIMINARY CHARTS

\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*



CHART TITLE - SUBROUTINE FUEL





GURT TITLE - NON-FRAGORAL STAINMENTS

COORDIN TCDW4000  
COORDIN 01000, T1000, SC100, ND4000  
COORDIN 01100, ND400  
COORDIN 0100, 01100, 01200, 01300  
COORDIN 01400, 01500  
COORDIN 01100, 01200  
COORDIN 01100, TCDW100, T1100, TCDW1000, SC100, TCDW1000  
COORDIN TCDW4000  
COORDIN 01100, 01, 01100, 01, 01100, 01, 01100, 01  
COORDIN 01  
COORDIN 01100, 01100, 01100, 01100  
COORDIN 01100, 01100  
COORDIN 01100, 01100  
COORDIN 01100, 01100  
COORDIN 01100, 01100, 01100, 01100, 01100, 01100  
COORDIN 01100, 01100, 01100, 01100  
COORDIN 01100, 01100, 01100, 01100, 01100, 01100  
COORDIN 01100, 01100, 01100, 01100, 01100, 01100  
COORDIN 01100, 01100, 01100, 01100, 01100, 01100  
COORDIN 01100, 01100, 01100, 01100, 01100, 01100

OVER/7

APPROXIMATE SET - 0000

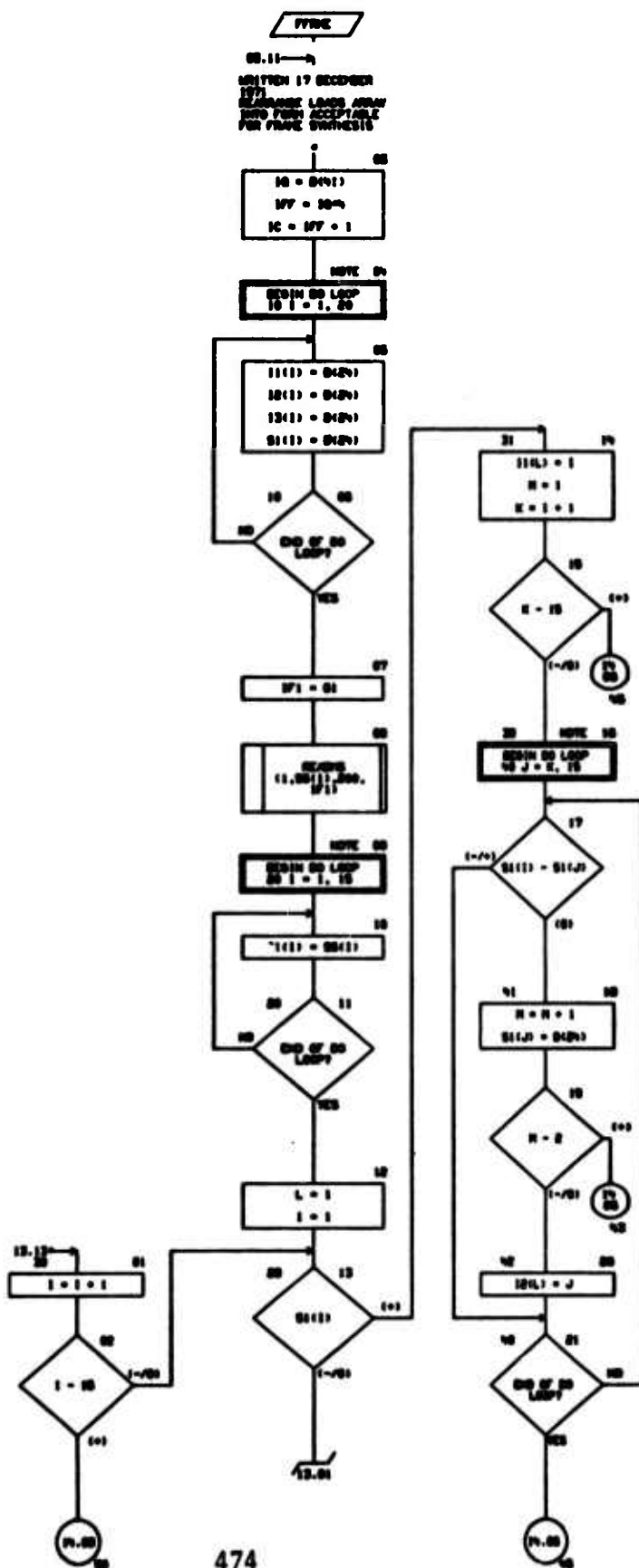
FIRST PUBLICATION OVERLAY

PAGE 10

SHORT TITLE - INTRODUCTORY COMMENTS

\*\*\*\*\*  
SIGNATURE FIVE  
\*\*\*\*\*

CHART TITLE - ALTERNATIVE FIVE



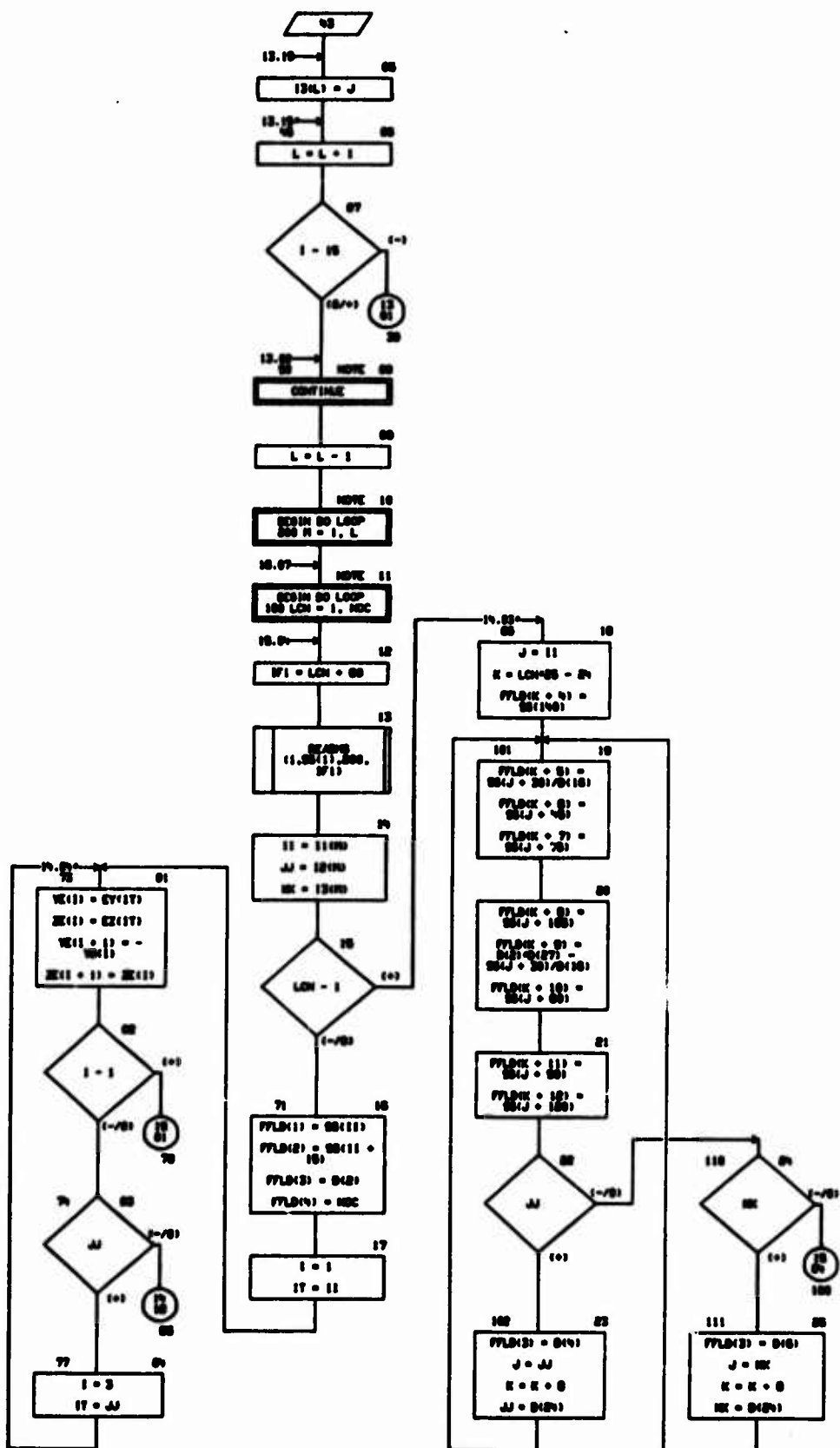
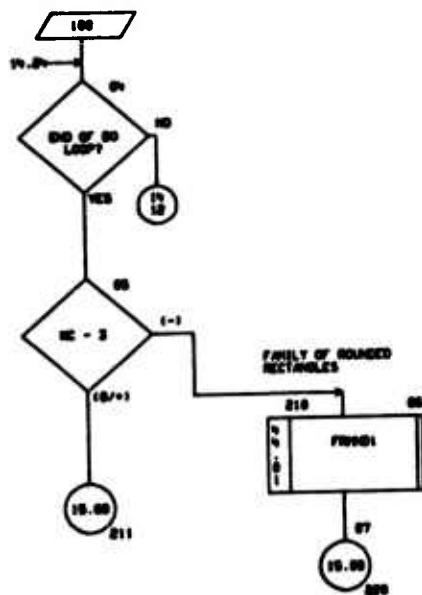
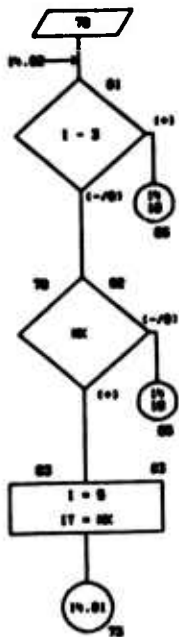
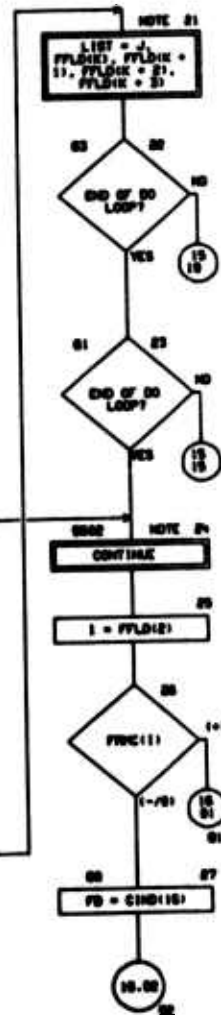
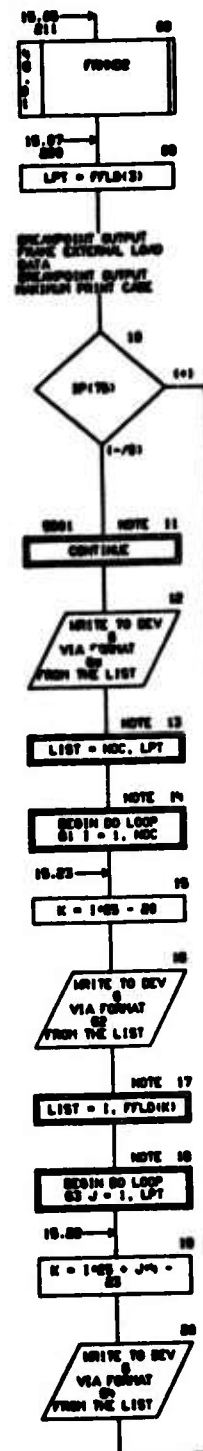


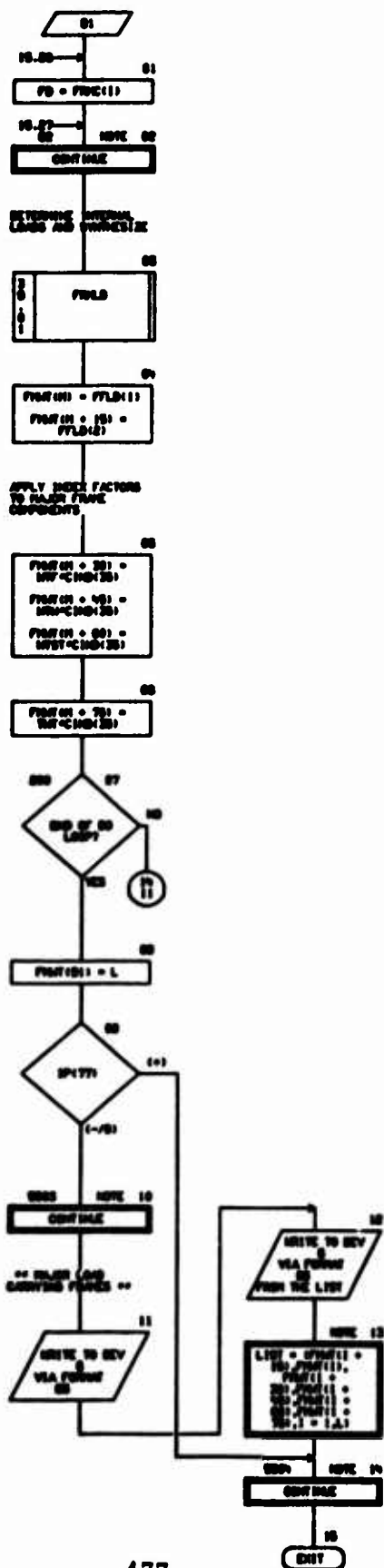
CHART TITLE - SUBROUTINE FTYPE



FAMILY OF ELLIPTICAL SHAPES



SHWT TITLE - DETERMINE FIVE







PAGE TWO  
SUBJECT - IMMEDIATELY ADVISE

\*\*\*\*\*  
AUGUST 1967 REV - DEEP FIRST PUBLICATION OVERLAY PAGE 10

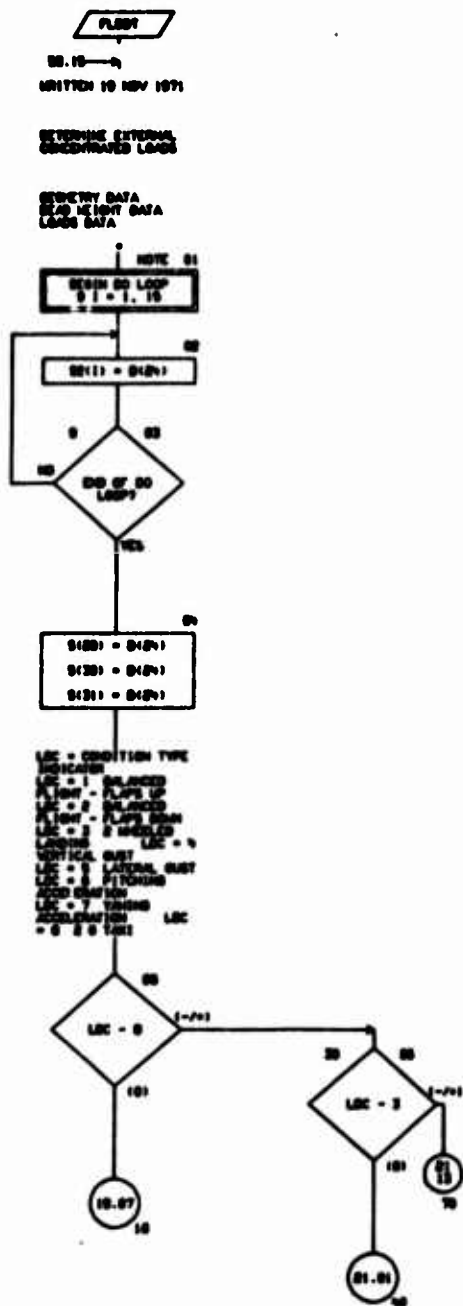
ATTENTION: THE FOLLOWING INFORMATION IS UNCLASSIFIED

PAGE 10

**CHART TITLE - IMMEDIATELY ABOVE**

### IMPROVING THE PLANET

CHART TITLE - SURVEYING PLOT

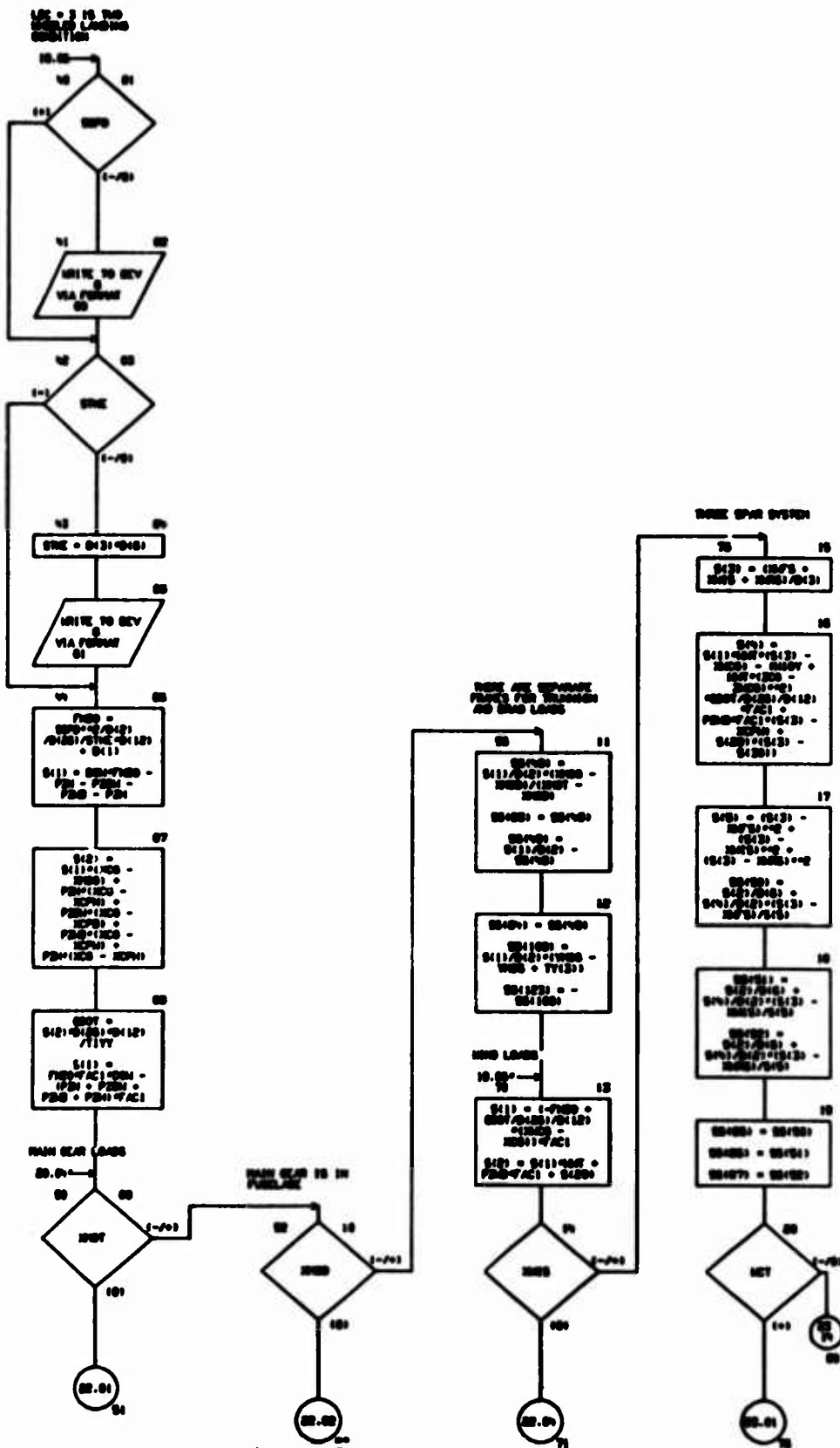


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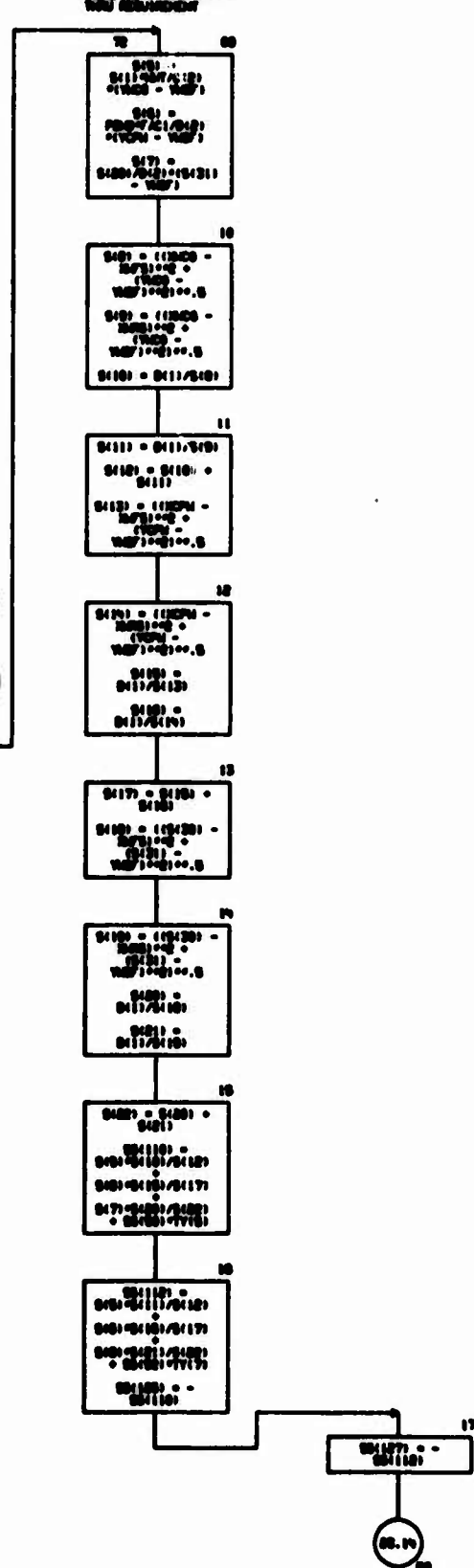
graph TD
    In1((20.00)) --> Box
    In2((00)) --> Box
    subgraph Box [ ]
        direction TB
        L1["SD(1) =  
SD(7)+2"]
        L2["SD(2) = SD(4)"]
        L3["SD(3) =  
SD(5)+SD(6) -  
SD(1)"]
    end
    Box --> Out1((21.00))
    Out1 --> Out2((00))
    Out2 --> In1

```

**CURT TYLE - SUBMITTING FLIGHT**



**THERE IS A MIND CARRY  
YOU REQUIREMENT**



SHUTT TITLE - SHUTTING FLOW

HERE IS A WING CARRY  
WING REQUIREMENT

01-02  
01  
0401 = (01000 -  
0401) \* 0.5  
0402 = (01000 -  
0401) \* 0.5  
0403 = (01000 -  
0401) \* 0.5

02  
0404 = (01000 -  
0401) \* 0.5  
0405 = (01000 -  
0401) \* 0.5  
0406 = (01000 -  
0401) \* 0.5

03  
0407 = (01000 -  
0401) \* 0.5  
0408 = (01000 -  
0401) \* 0.5  
0409 = (01000 -  
0401) \* 0.5

04  
0410 = (01000 -  
0401) \* 0.5  
0411 = (01000 -  
0401) \* 0.5  
0412 = (01000 -  
0401) \* 0.5

05  
0413 = (01000 -  
0401) \* 0.5  
0414 = (01000 -  
0401) \* 0.5  
0415 = (01000 -  
0401) \* 0.5

06  
0416 = (01000 -  
0401) \* 0.5  
0417 = (01000 -  
0401) \* 0.5  
0418 = (01000 -  
0401) \* 0.5

07  
0419 = (01000 -  
0401) \* 0.5  
0420 = (01000 -  
0401) \* 0.5  
0421 = (01000 -  
0401) \* 0.5

08  
0422 = (01000 -  
0401) \* 0.5  
0423 = (01000 -  
0401) \* 0.5  
0424 = (01000 -  
0401) \* 0.5

09  
0425 = (01000 -  
0401) \* 0.5  
0426 = (01000 -  
0401) \* 0.5  
0427 = (01000 -  
0401) \* 0.5

10  
0428 = (01000 -  
0401) \* 0.5  
0429 = (01000 -  
0401) \* 0.5  
0430 = (01000 -  
0401) \* 0.5

11  
0431 = (01000 -  
0401) \* 0.5  
0432 = (01000 -  
0401) \* 0.5  
0433 = (01000 -  
0401) \* 0.5

12  
0434 = (01000 -  
0401) \* 0.5  
0435 = (01000 -  
0401) \* 0.5  
0436 = (01000 -  
0401) \* 0.5

13  
0437 = (01000 -  
0401) \* 0.5  
0438 = (01000 -  
0401) \* 0.5  
0439 = (01000 -  
0401) \* 0.5

14  
0440 = (01000 -  
0401) \* 0.5  
0441 = (01000 -  
0401) \* 0.5  
0442 = (01000 -  
0401) \* 0.5

15  
0443 = (01000 -  
0401) \* 0.5  
0444 = (01000 -  
0401) \* 0.5  
0445 = (01000 -  
0401) \* 0.5

16  
0446 = (01000 -  
0401) \* 0.5  
0447 = (01000 -  
0401) \* 0.5  
0448 = (01000 -  
0401) \* 0.5

17  
0449 = (01000 -  
0401) \* 0.5  
0450 = (01000 -  
0401) \* 0.5  
0451 = (01000 -  
0401) \* 0.5

HORIZONTAL TAIL IS ON  
FUELAGE

18  
0452 = (01000 -  
0401) \* 0.5  
0453 = (01000 -  
0401) \* 0.5  
0454 = (01000 -  
0401) \* 0.5

19  
0455 = (01000 -  
0401) \* 0.5  
0456 = (01000 -  
0401) \* 0.5  
0457 = (01000 -  
0401) \* 0.5

20  
0458 = (01000 -  
0401) \* 0.5  
0459 = (01000 -  
0401) \* 0.5  
0460 = (01000 -  
0401) \* 0.5

21  
0461 = (01000 -  
0401) \* 0.5  
0462 = (01000 -  
0401) \* 0.5  
0463 = (01000 -  
0401) \* 0.5

22  
0464 = (01000 -  
0401) \* 0.5  
0465 = (01000 -  
0401) \* 0.5  
0466 = (01000 -  
0401) \* 0.5

23  
0467 = (01000 -  
0401) \* 0.5  
0468 = (01000 -  
0401) \* 0.5  
0469 = (01000 -  
0401) \* 0.5

HERE IS A HORIZONTAL  
TAIL CARRY WING  
REQUIREMENT - TWO  
POINT

24  
0470 = (01000 -  
0401) \* 0.5  
0471 = (01000 -  
0401) \* 0.5  
0472 = (01000 -  
0401) \* 0.5

25  
0473 = (01000 -  
0401) \* 0.5  
0474 = (01000 -  
0401) \* 0.5  
0475 = (01000 -  
0401) \* 0.5

26  
0476 = (01000 -  
0401) \* 0.5  
0477 = (01000 -  
0401) \* 0.5  
0478 = (01000 -  
0401) \* 0.5

27  
0479 = (01000 -  
0401) \* 0.5  
0480 = (01000 -  
0401) \* 0.5  
0481 = (01000 -  
0401) \* 0.5

28  
0482 = (01000 -  
0401) \* 0.5  
0483 = (01000 -  
0401) \* 0.5  
0484 = (01000 -  
0401) \* 0.5

29  
0485 = (01000 -  
0401) \* 0.5  
0486 = (01000 -  
0401) \* 0.5  
0487 = (01000 -  
0401) \* 0.5

30  
0488 = (01000 -  
0401) \* 0.5  
0489 = (01000 -  
0401) \* 0.5  
0490 = (01000 -  
0401) \* 0.5

31  
0491 = (01000 -  
0401) \* 0.5  
0492 = (01000 -  
0401) \* 0.5  
0493 = (01000 -  
0401) \* 0.5

485





**DATE FILE - NEW-ORLEANS, LA 10/1/68**

[illegible]

04/05/74

AUTOFLON CHART SET - SHEEP FIRST PURCHASE OVERLAY

PAGE 07

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE FLOWCH  
.....



CHART TITLE - NEW-PROCEDURAL STANDARDS

```

CONV: TCM4000
CONV: 01000, T1000, SC100, SD100
CONV: 0100, S2100, S3100, S4100
CONV: 02100
CONV: 03100, 04100, V12100
CONV: 05100, 06100
CONV: 07100
CONV: 08100, TCM4000, (T100, TCM4000), (SC100, TCM4000),
    (SD100, TCM4000)
CONV: 09100, JC
CONV: 10100, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
CONV: 11100, 12100
CONV: 13100, 14100, 15100, 16100, 17100, 18100, 19100, 20100, 21100, 22100, 23100, 24100, 25100, 26100, 27100, 28100, 29100, 30100, 31100, 32100, 33100, 34100, 35100, 36100, 37100, 38100, 39100, 40100, 41100, 42100, 43100, 44100, 45100, 46100, 47100, 48100, 49100, 50100, 51100, 52100, 53100, 54100, 55100, 56100, 57100, 58100, 59100, 60100, 61100, 62100, 63100, 64100, 65100, 66100, 67100, 68100, 69100, 70100, 71100, 72100, 73100, 74100, 75100, 76100, 77100, 78100, 79100, 80100, 81100, 82100, 83100, 84100, 85100, 86100, 87100, 88100, 89100, 90100, 91100, 92100, 93100, 94100, 95100, 96100, 97100, 98100, 99100, 100100

```

04/03/74

AUTOFLIN CHART SET - SHEEP FIRST FUELAGE OVERLAY

PAGE 30

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE FLINT  
.....

**REPORT TITLE - SUBMITTING AGENCY**

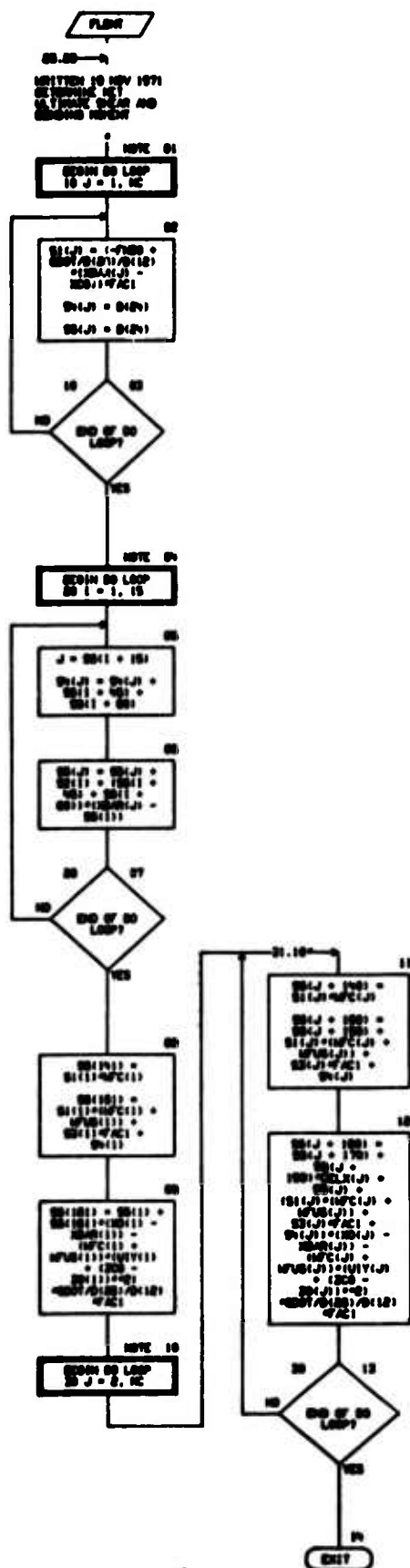


CHART TITLE - NON-PROCEDURAL STANDARDS

```

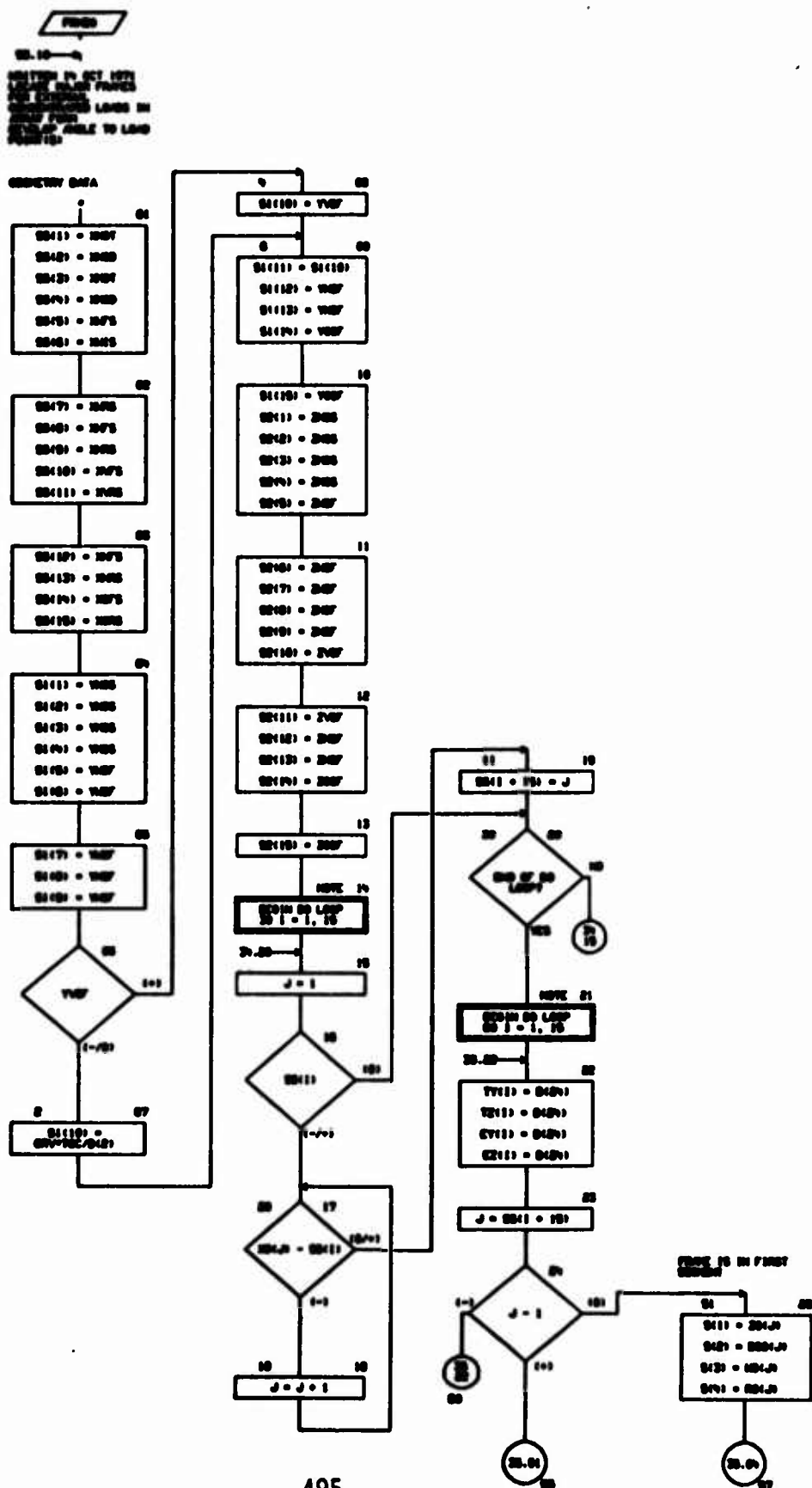
COMMON TCOM(400)
DIMENSION S(2000),T(2000),SC(100),SD(200)
DIMENSION ZD(20)
DIMENSION HD(20)
DIMENSION S1(20),S2(20),S3(20),S4(20),S5(20),S6(200)
DIMENSION SDR(200)
DIMENSION MFC(20),AFUS(20)
DIMENSION HBAR(20),SELX(20),MIV(20)
DIMENSIONCE (S(1),TCOM(1)),(T(1),TCOM(200)),(SC(1),TCOM(410)),
              (SD(1),TCOM(201))
DIMENSIONCE (S(201),SD(1))
DIMENSIONCE (T(201),SD(1))
DIMENSIONCE (S(1101),SD(1))
DIMENSIONCE (SD(101),MFC(1)),(SD(17),AFUS(1))
DIMENSIONCE (T(201),HBAR(1)),(T(201),SELX(1)),(T(201),MIV(1))
DIMENSIONCE (SD(10),FAC(1)),(SD(17),FWD(1)),(SD(10),SDOT(1)),
              (SD(102),JCO(1)),(SD(104),JCO(1))
DIMENSIONCE              (T(101),S1(1)),(T(101),S2(1)),
              (T(101),S3(1)),(T(101),S4(1)),(T(101),S5(1)),(T(101),S6(1))
DIMENSIONCE (SD(101),1), (SD(102),J)
DIMENSIONCE (SD(111),JC)

```

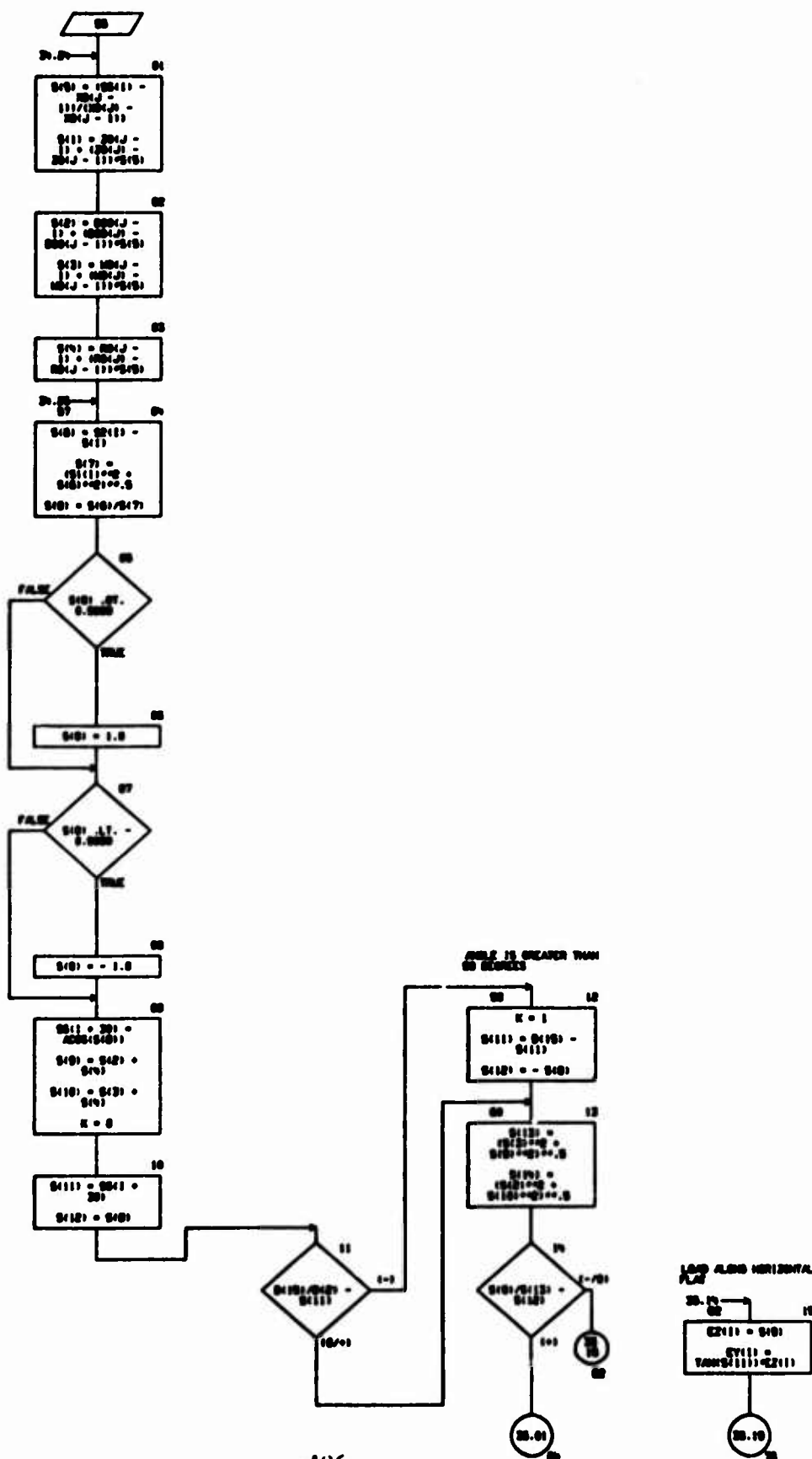


PAGE 13

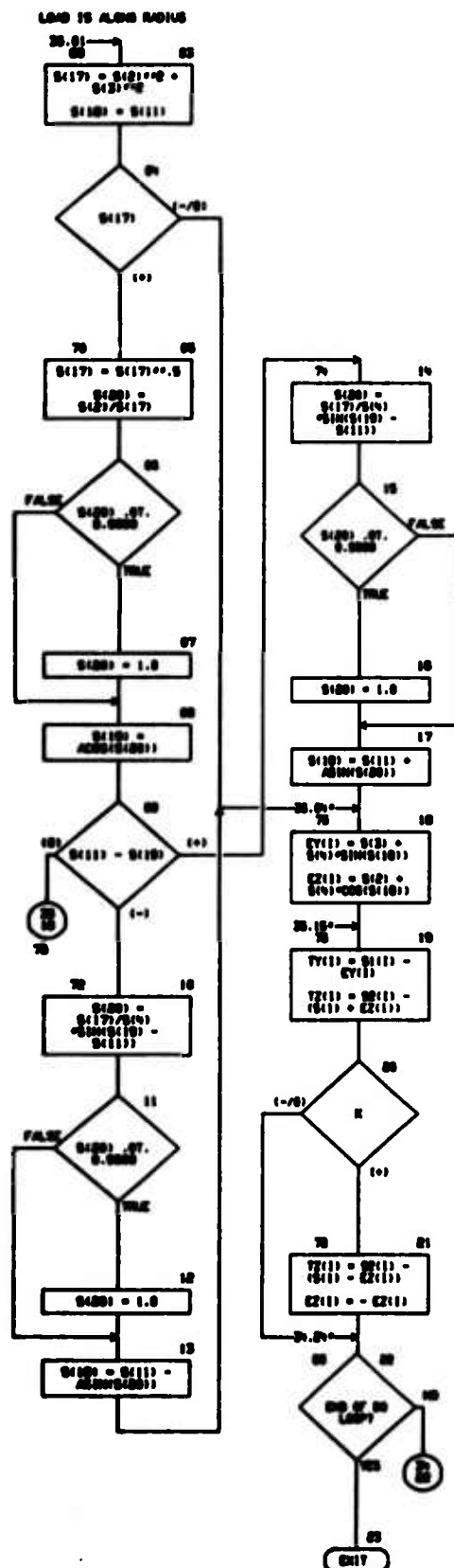
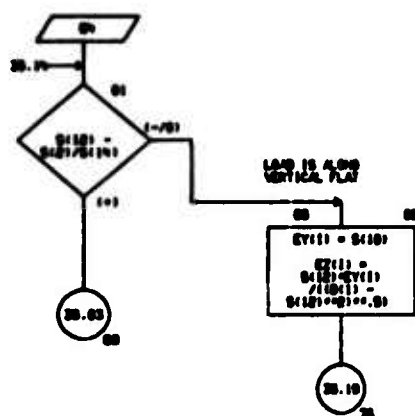
\*\*\*\*\*  
SUBMITTING PAGES  
\*\*\*\*\*

**CHART FILE - BUREAU FILE**

SHOT TITLE - OVERLAYING POWER



**SHORT TITLE - BUREAU OF PRICES**



[illegible]

04/28/74

AUTOFLEX GAST SET - GSEP

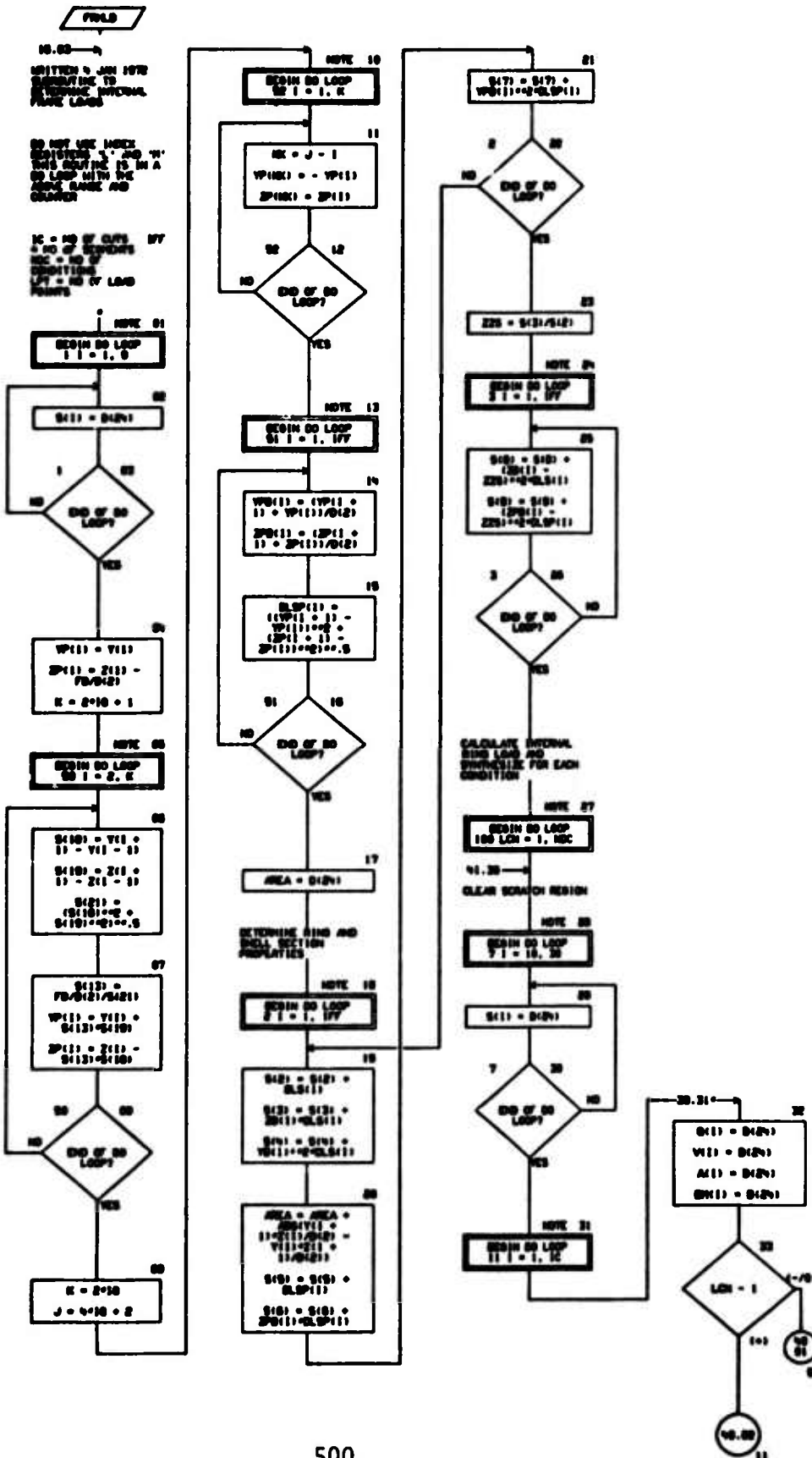
FIRST FUEL/AC OVERLAY

PAGE 20

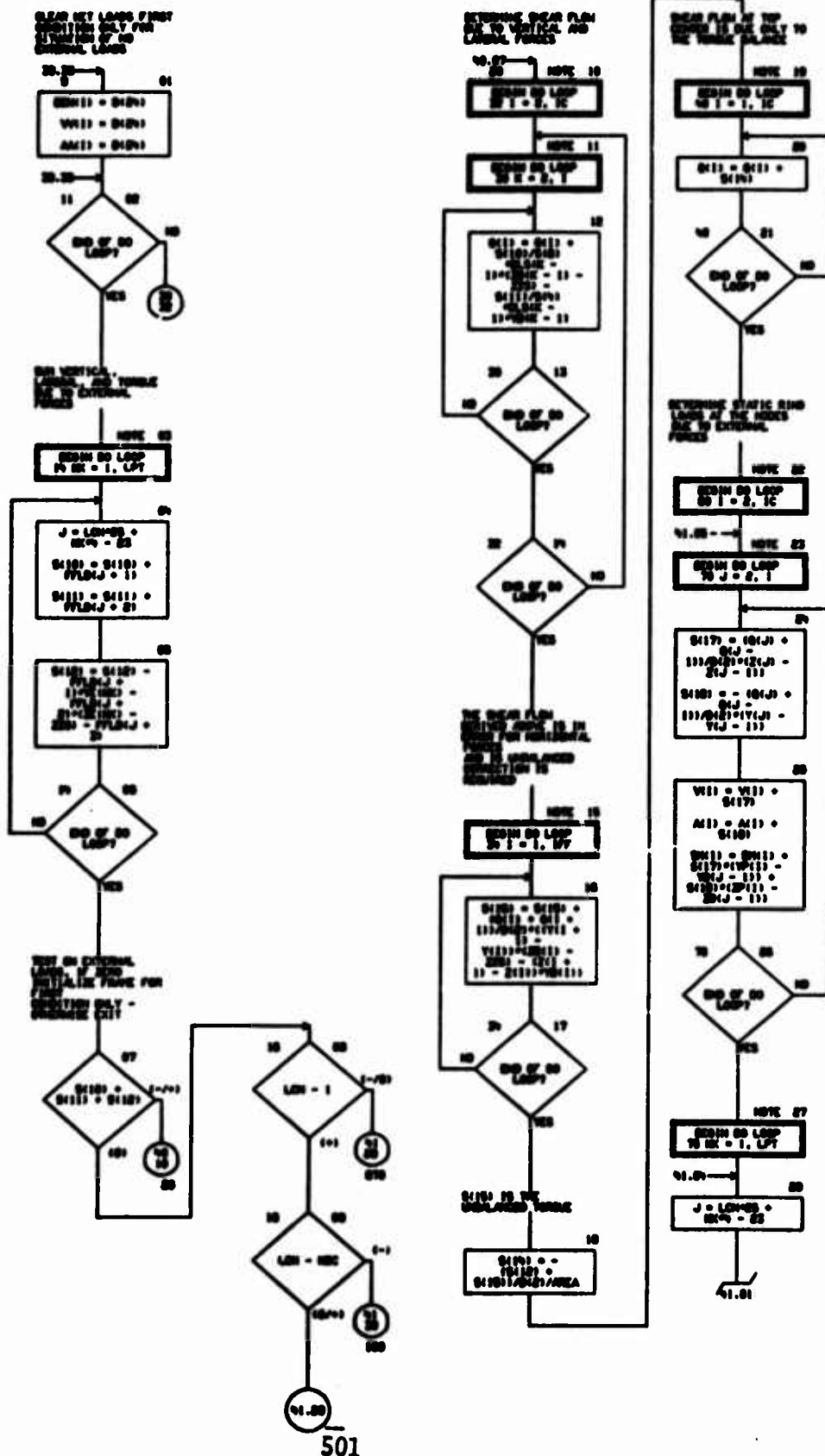
GAST TITLE - INTRODUCTORY COMMENTS

.....  
DESCRIPTIVE FIELD  
.....

CHART TITLE - SUBROUTINE FVLD

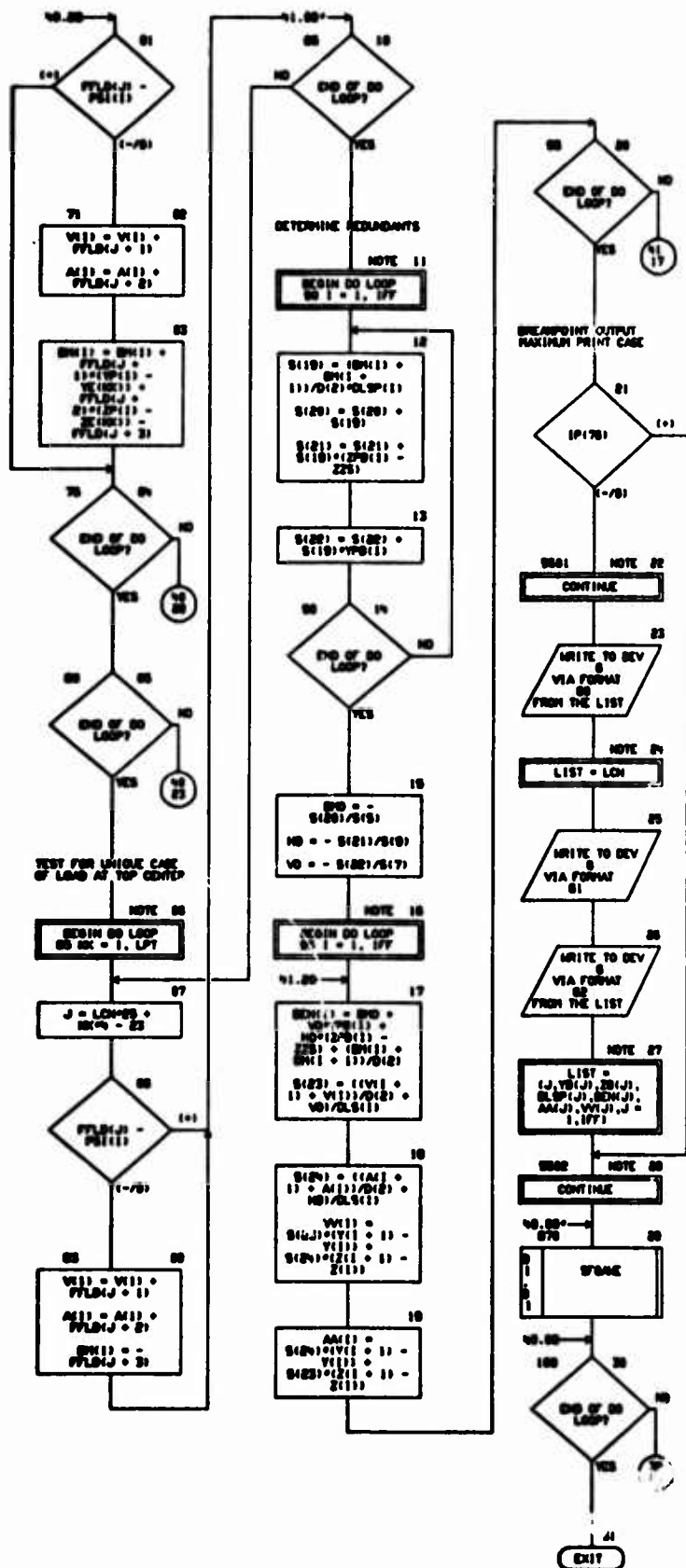


QUEST TITLE - SUBMITTING FIELD





502



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

      GIVEN TCONV400)
      GIVEN /FPMH/SP100)
      DIMENSION S(100),FPLD(100),V(10),Z(10),PS(10),VB(10),ZB(10),
      BLS(10),WP(10),SP(10),VP(10),SPB(10),LSP(10),G(10),V(10)
      DIMENSION VE(10),ZE(10)
      DIMENSION A(10),B(10),BCH(10),AA(10),VV(10)
      EQUIVALENCE (B(1),TCONV1), (V(1),TCONV200), (B(1),TCONV410),
      (B(1),TCONV400))
      EQUIVALENCE (V(1),S(1)), (V(10),FPLD(1)), (V(10),ZB(1))
      , (V(10),BLS(1)), (V(10),WP(1)), (V(10),SP(1))
      , (V(10),VP(1)), (V(10),SPB(1)), (V(10),LSP(1))
      , (V(10),V(1)), (V(10),Z(1)), (V(10),PS(1))
      , (V(10),G(1)), (V(10),V(1)), (V(10),VB(1))
      EQUIVALENCE (VE(1),T(100)), (ZE(1),T(100))
      EQUIVALENCE (B(10),A(1)), (B(10),B(1)), (B(10),BCH(1)),
      (B(10),AA(1)), (B(10),VV(1))
      EQUIVALENCE (S(1),F(1)), (S(1),AREA), (S(1),ZTS), (S(1),B'D),
      (S(1),J), (S(1),V(1))
      EQUIVALENCE (B(10),I), (B(10),J), (B(10),K), (B(10),M),
      EQUIVALENCE (B(10),LCH), (B(10),MCH), (B(10),LPT),
      (B(10),IC), (B(10),M7)
00  FORMAT(1H,2X,10L040 SET =,13,7X,BEEP FIELD = (P17) **)
01  FORMAT(1H,2X,BCH,2X,WPBAR,2X,VPBAR,2X,SPB,2X,VB,2X,B'D,2X,
      2X,BCHAL,10X,BCHAL)
02  FORMAT(10,F10.3,Z(17.7)

```

01/20/74

ALPHABET CHART SET - SHEEP FIRST FUELAGE OVERLAY

PAGE 43

CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE FRODO  
#####

**FIGURE 1**

15.05--4  
WRITTEN 20 DECEMBER  
1971  
DEVELOP MORE  
COORDINATES FOR 61  
PAGES

DO NOT USE ROCK  
RESISTANCE. NO "H"  
THIS ROUTINE IS IN A  
DO LOOP WITH THE  
ADDITIONAL NO  
CHANGES

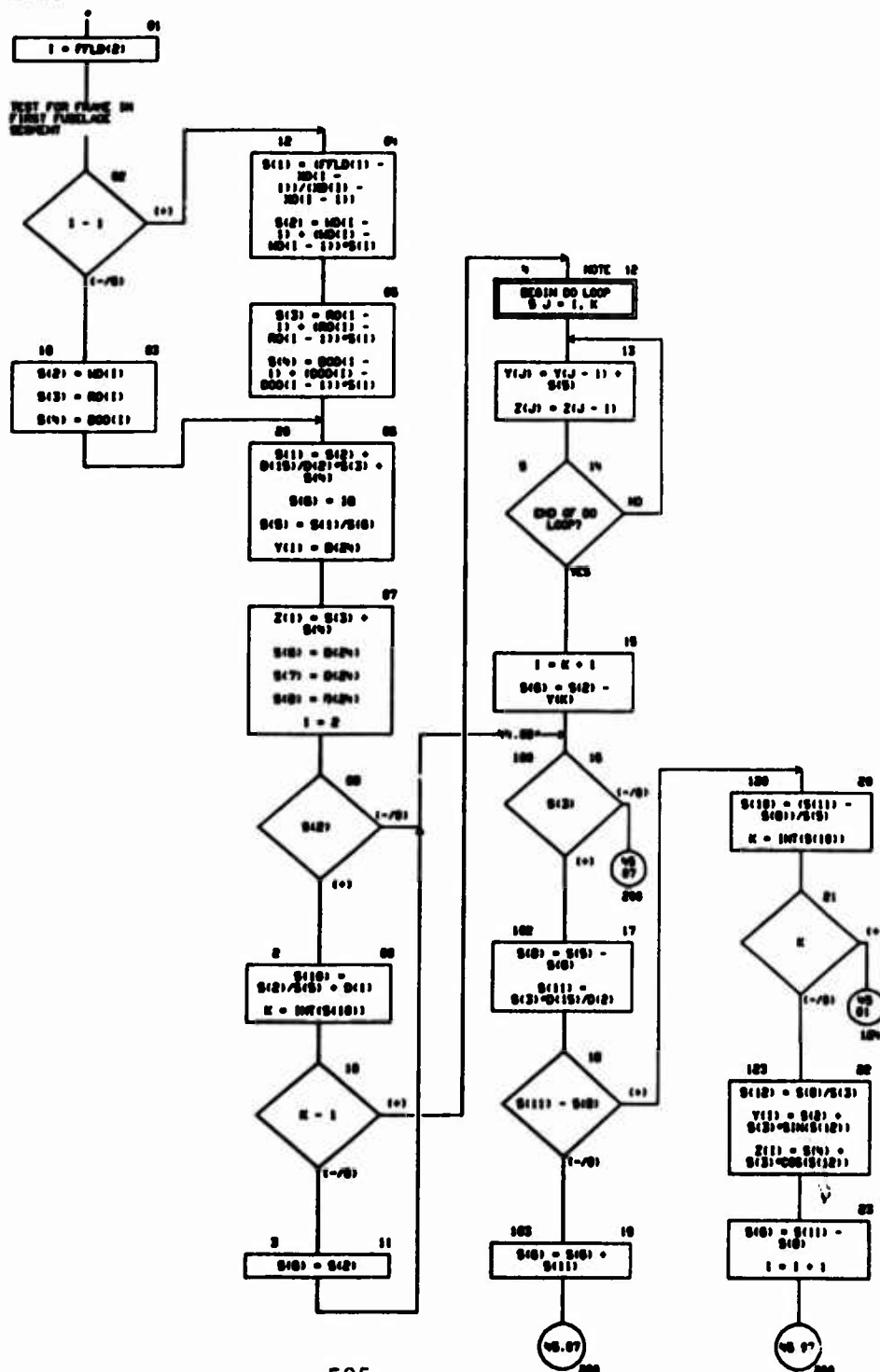


CHART TITLE - SURF TIME FROM:

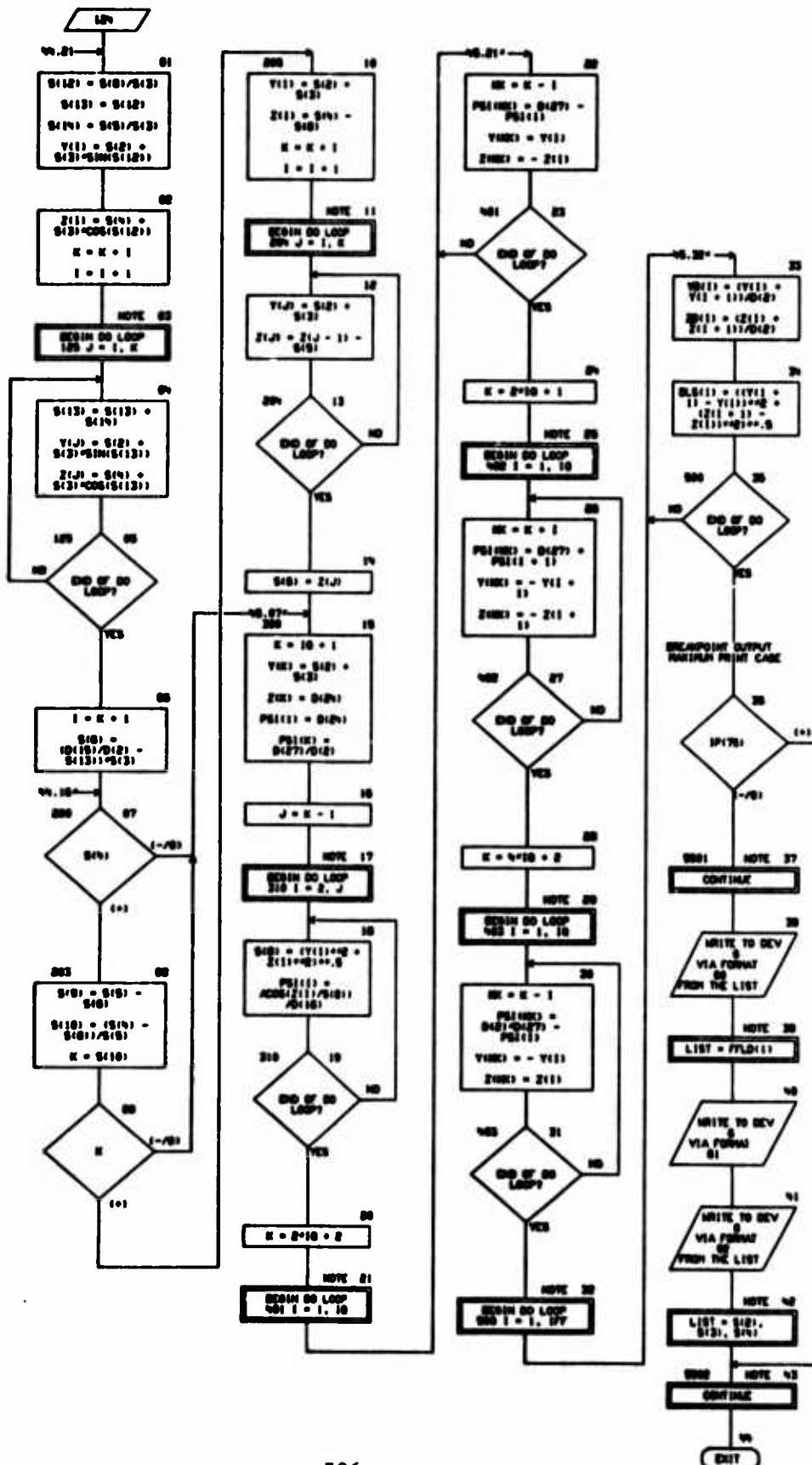


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

      COPEN TCON(400)
      COPEN / (PRINT/1P100)
      DIMENSION S(1000),T(1000),SC(100),JD(1000)
      DIMENSION ND(20)
      DIMENSION S(100),SD(120),JD(20),JD(20),JFLD(100),
      YB(1),Z(10),PS(10),YB(10),SD(10),LS(10)
      EQUIVALENCE (S(1),TCON(1)),(T(1),TCON(200)),(SC(1),TCON(410)),
      (JD(1),TCON(401))
      EQUIVALENCE (S(20),JD(1))
      EQUIVALENCE (T(1),S(1)),(T(41),SD(1)),(T(46),JD(1))
      , (T(48),JD(1)),(T(62),JFLD(1)),(T(124),SD(1))
      , (T(130),LS(1)),(T(167),Y(1)),(T(173),Z(1))
      , (T(174),PS(1)),(S(110),YB(1))
      EQUIVALENCE (ND(101),1), (ND(102),J), (ND(103),K), (ND(107),11),
      (ND(108),J), (ND(109),K)
      EQUIVALENCE (ND(110),10), (ND(120),10), (ND(121),177)
00      FORMAT(1H,10H,FUSELAGE STATION =,F9.2,4X,
      2H** FROM - 1P175 ** )
01      FORMAT(1H,14H,SYMMETRY TYPE IS ROUNDED RECTANGLE)
02      FORMAT(1H,4H,10HORIZ FLAT =,F7.2,3H,RADIUS =,F7.2,3H,
      10HVERT FLAT =,F7.2)

```

04/08/74

ARDFLAN GUNT SET - BEEP FIRST FUELAGE OVERLAY

PAGE 47

GUNT TITLE - INTRODUCTORY COMMENTS

oo  
SUBMITTING POWER  
oo

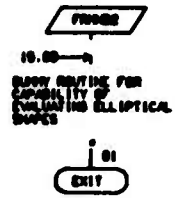
04/03/74

AUTOFLEX SHORT SET - SHEEP

FIRST FUELAGE OVERLAY

PAGE 40

SHORT TITLE - SUBROUTINE FUDGE





PAGE 40

```

OPEN TCDW4001
DIMENSION B(1000),T(1000),JC(100),JD(100)
DO WHILE JC(1) .GT. 0
  TCDW=JC(1)
  T(1)=TCDW
  JC(1)=JC(100)
  JD(1)=JD(100)
  TCDW=JD(1)

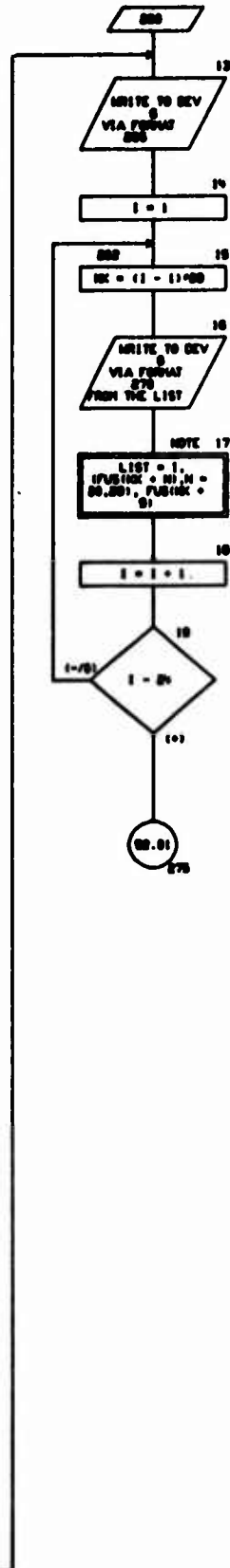
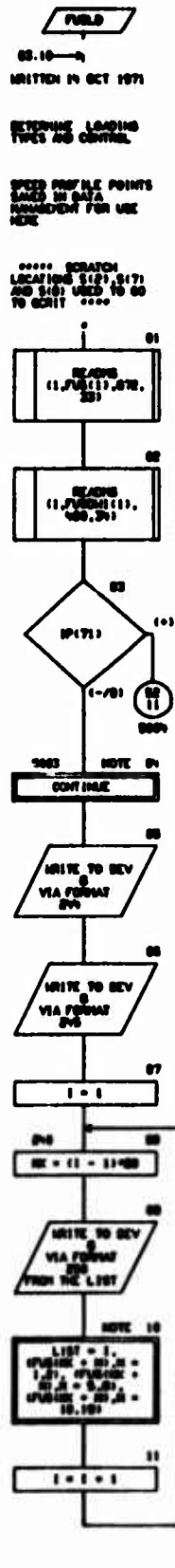
```

**CHART TITLE - INTERPRETATION GUIDANCE**

AUSTRIA CHART SET - SHEEP FIRST FUELAGE OVERLAY PAGE 00

511

GURT TITLE - SURVIVANCE FUEL

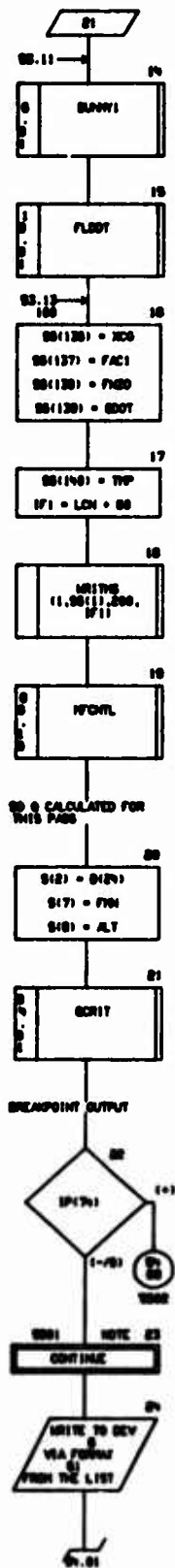
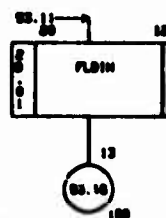
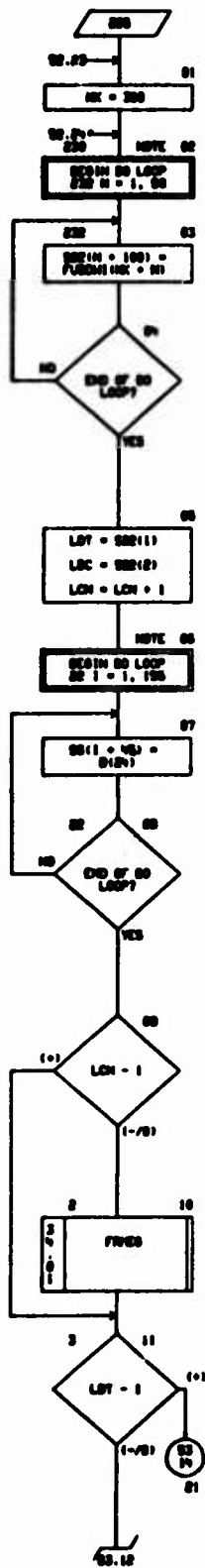


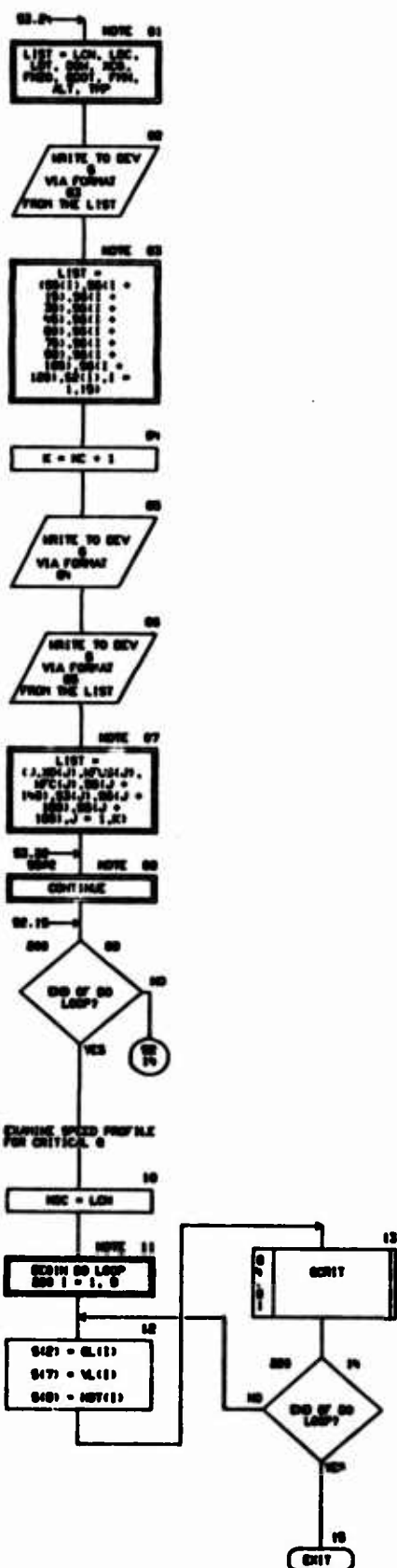
513

01-00-01

ALGORITHM UNIT 01 0001 FIRST PAGES 01-00-01

SHORT TITLE - SUBROUTINE FUEL







## SHOT TITLE - NON-PROCEDURAL STATEMENTS

```

000  FORMAT
      SH,SHFC( 1) ,F15.1/SH,SHFC( 2) ,F15.1/SH,SHFC( 3) ,F15.1/
      SH,SHFC( 4) ,F15.1/SH,SHFC( 5) ,F15.1/SH,SHFC( 6) ,F15.1/
      SH,SHFC( 7) ,F15.1/SH,SHFC( 8) ,F15.1/SH,SHFC( 9) ,F15.1/
      SH,SHFC(10) ,F15.1/SH,SHFC(11) ,F15.1/SH,SHFC(12) ,F15.1/
      SH,SHFC(13) ,F15.1/SH,SHFC(14) ,F15.1/SH,SHFC(15) ,F15.1/
      SH,SHFC(16) ,F15.1/SH,SHFC(17) ,F15.1/SH,SHFC(18) ,F15.1/
      SH,SHFC(19) ,F15.1/SH,SHFC(20) ,F15.1/SH,SHFUS( 1) ,F15.1/
      SH,SHFUS( 2) ,F15.1/SH,SHFUS( 3) ,F15.1/SH,SHFUS( 4) ,F15.1/
      SH,SHFUS( 5) ,F15.1/SH,SHFUS( 6) ,F15.1/SH,SHFUS( 7) ,F15.1/
      SH,SHFUS( 8) ,F15.1/SH,SHFUS( 9) ,F15.1/SH,SHFUS(10) ,F15.1/
      SH,SHFUS(11) ,F15.1/SH,SHFUS(12) ,F15.1/SH,SHFUS(13) ,F15.1/
      SH,SHFUS(14) ,F15.1/SH,SHFUS(15) ,F15.1/SH,SHFUS(16) ,F15.1/
      SH,SHFUS(17) ,F15.1/SH,SHFUS(18) ,F15.1/SH,SHFUS(19) ,F15.1/
      SH,SHFUS(20) ,F15.1)
01  FORMAT(SH,SHALTITUDE,4X,SHUNCH NO. ,SH,1H0/SH,F3.1,4X,F3.4,
      4X,F3.1)
02  FORMAT(1H1,4X,1H*** LOADS AHEAD ***SH,
      SH** FUEL3 - (P17) **SH,
      THCASE NO,13,4X,SHLOAD TYPE,13,4X,SHDATA TYPE,13/SH,
      SHCH =,F3.1,SH,SHC.O. =,F7.1,SH,SHOE =,F3.1,SH,SHEDOT =,F3.3,
      SH,SHOH =,F3.2,SH,SHALT. =,F3.1,SH,SHTOP =,F3.1/SH,SHETATION,
      SH,SHEDIENT,SH,SHMETA,SH,SHME-RI,SH,SHME-LN,SH,SHMY-RI,SH,
      SHV-LN,TH,SHCH-RI,TH,SHCH-LN,4X,SHV-COUPLE)
03  FORMAT(F3.1,F3.3,4F11.1,F12.1)
04  FORMAT(1H0,SH,SHOUT/SHO,4X,SHETATION,SH,SHV FUS,4X,SHV CONT.,
      SH,SHV-CONT.,SH,SHAJLOAD,SH,SHOEAR-VZ,SH,SHEDIENT-MY)
05  FORMAT(TH,16,F13.1,4F12.1,F14.1)

```





04/05/79

AUTOFLEX CHART SET - SHEEP FIRST PURCHASE OVERLAY

PAGE 07

CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE GENOP1  
#####



CONF 1

SCRATCH AREA  
01 = DEPTH  
02 = WIDTH  
03 = AREA  
0000-SECTION

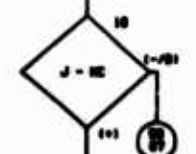
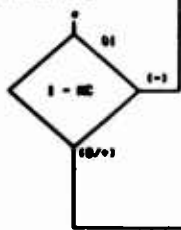
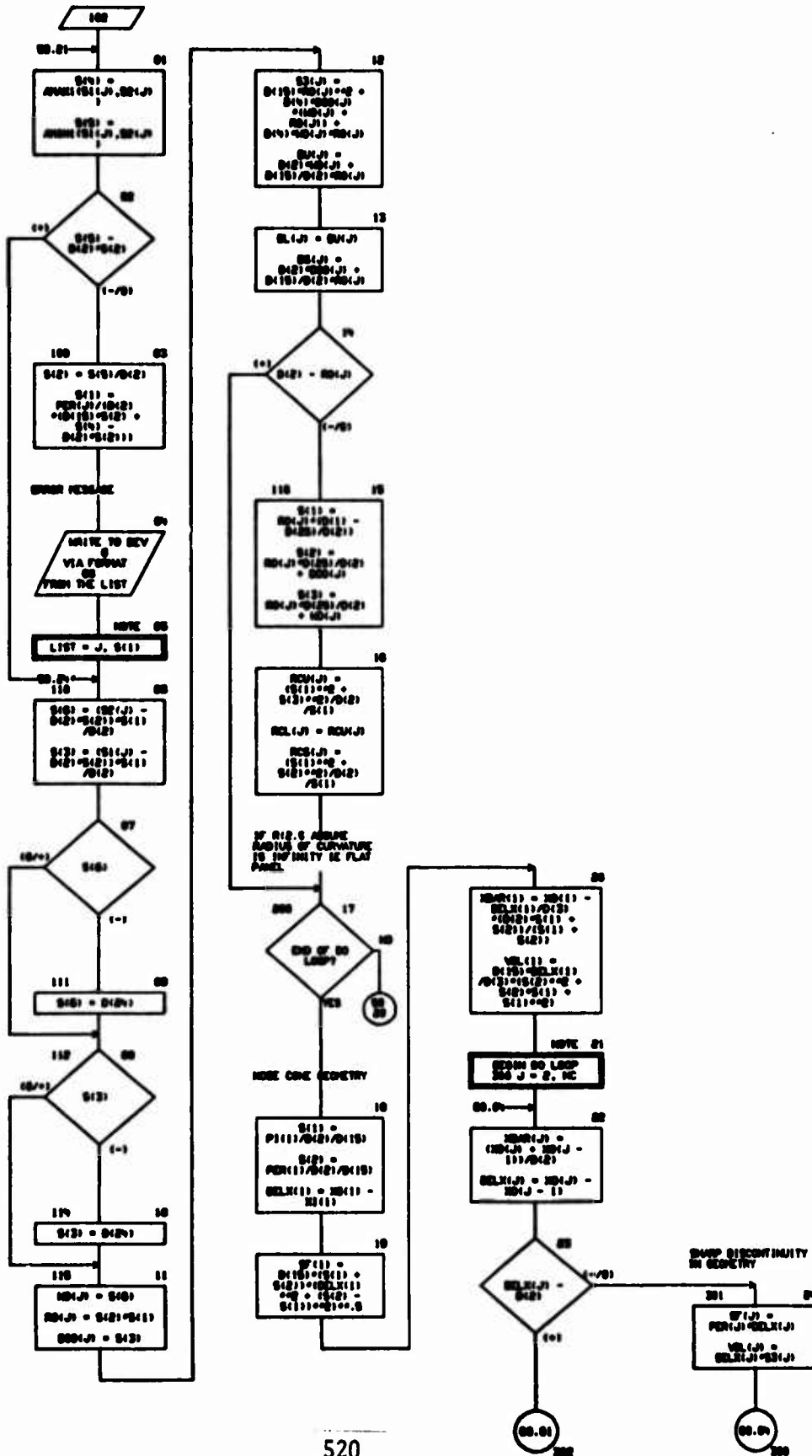


CHART TITLE - SUBROUTINE 00001







01/08/76

AUTOFLOW CHART SET - BEEP

FIRST FUELAGE OVERLAY

PAGE 02

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SIGNATURE HERE  
.....

09/08/74

AUGUSTEN CHART SET - DEEP FIRST FUELAGE OVERLAY

PAGE 03

CHART TITLE - SUBJECTIVE COVER



6-7/8/74

AUTOFLY CHART SET - SHEEP

FIRST FUELAGE OVERLAY

PAGE 04

CHART TITLE - NON-PROCEDURAL STATEMENTS

CONVIN TCONV400

DIMENSION 0(2000),7(2000),8C(100),J0(200)

CONVANCE 0(1),TCONV(1),17(1),TCONV200(1),18C(1),TCONV410(1),

0(1),TCONV20(1)



04/05/75

AIRPLAN CHART SET - DEEP FIRST FUELAGE OVERLAY

PAGE 05

CHART TITLE - INTRODUCTORY COMMENTS

\*\*\*\*\*  
SUBROUTINE SHORTS  
\*\*\*\*\*

16

17

18

## CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON TCBW400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION S(100)
DIMENSION P(100),ND(00)
DIMENSION HBAR(20),SELX(20),DOB(20),MB(20),RD(20),PER(20)
DIMENSION UH(20),UY(20),VIZ(20)
EQUIVALENCE (D(1),TCBW(1)),(T(1),TCBW(200)),(DC(1),TCBW(10)),
  (ND(1),TCBW(50))
EQUIVALENCE (T(1),S(1))
EQUIVALENCE (ND(10),HC)
EQUIVALENCE (ND(100),J)
EQUIVALENCE (T(20),HBAR(1)),(T(20),SELX(1)),(T(40),DOB(1)),
  (T(60),MB(1)),(T(80),RD(1)),(T(100),PER(1))
EQUIVALENCE (T(20),UH(1)),(T(20),UY(1)),(T(20),VIZ(1))
EQUIVALENCE (D(20),P(1))
EQUIVALENCE (D(20),ND(1))
```

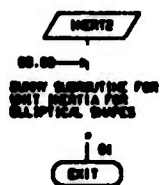
SUBMITTING MEMO

04/00/74

AUTOFLY CHART SET - BEEP FIRST FUELAGE OVERLAY

PAGE 00

CHART TITLE - SUBROUTINE MERT2



01/05/74

AUTOFLN GURT SET - BEEP FIRST PUBLAGE OVERLAY

PAGE 70

GURT TITLE - NON-PROCEEDING STATEMENTS

GENEN TCDN4001  
DNDNDN 010001,710001,0C11001,AD1001  
DNDNDN 0111,TCN111,(T11),TCN00011,(0C11),TCN41011,  
0B11,TCN40011

9/18/74

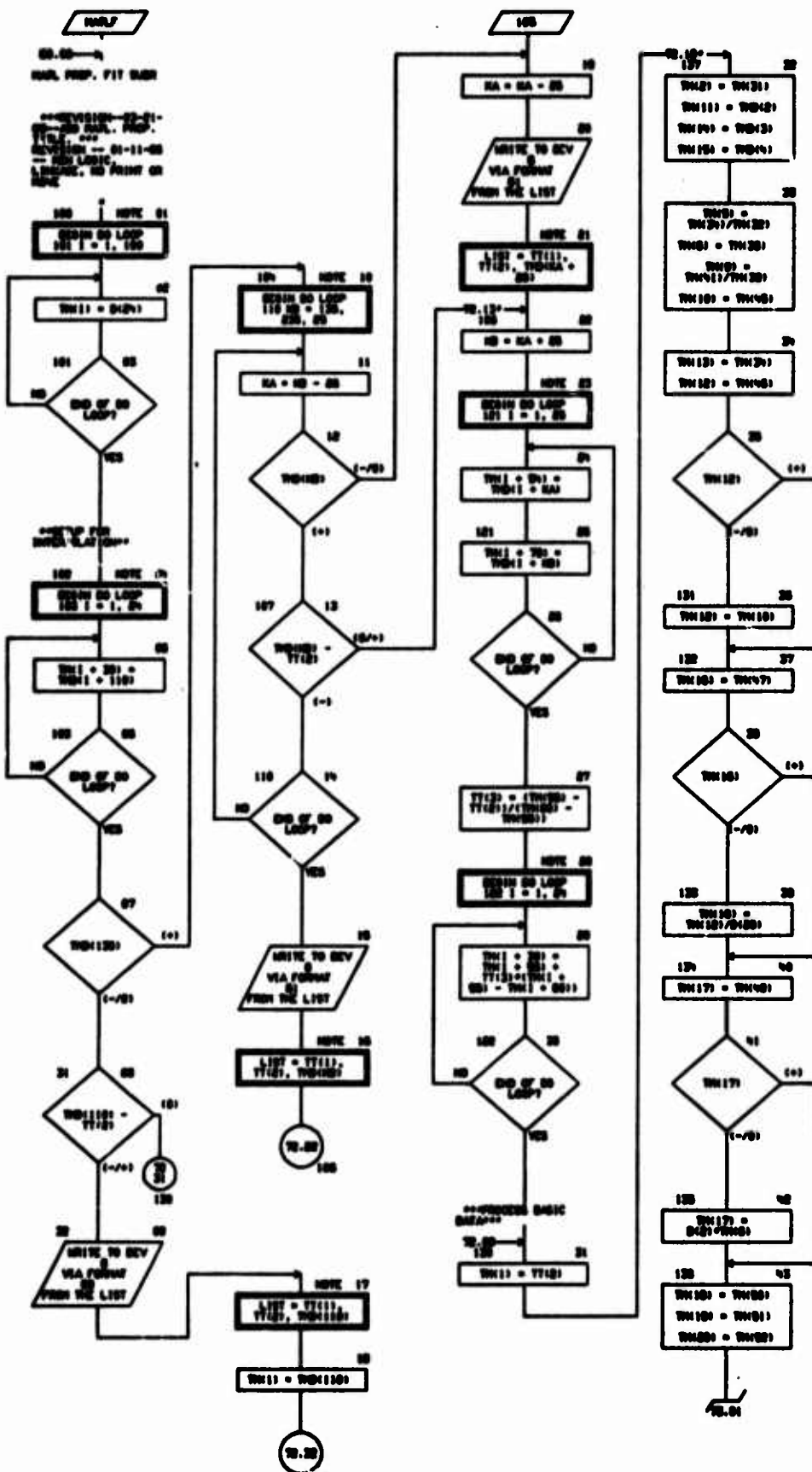
AUTOFLEX CHART SET - DEEP FIRST PAPER/RE OVERLAY

PAGE 71

CHART TITLE - INTRODUCTORY COMMENTS

.....  
DERIVATIVE MAPS  
.....

CHART TITLE - SUBROUTINE HAWF









04/05/74

AUTOFLEX GUNST SET - GUNST FIGHT FUELAGE OVERLAY

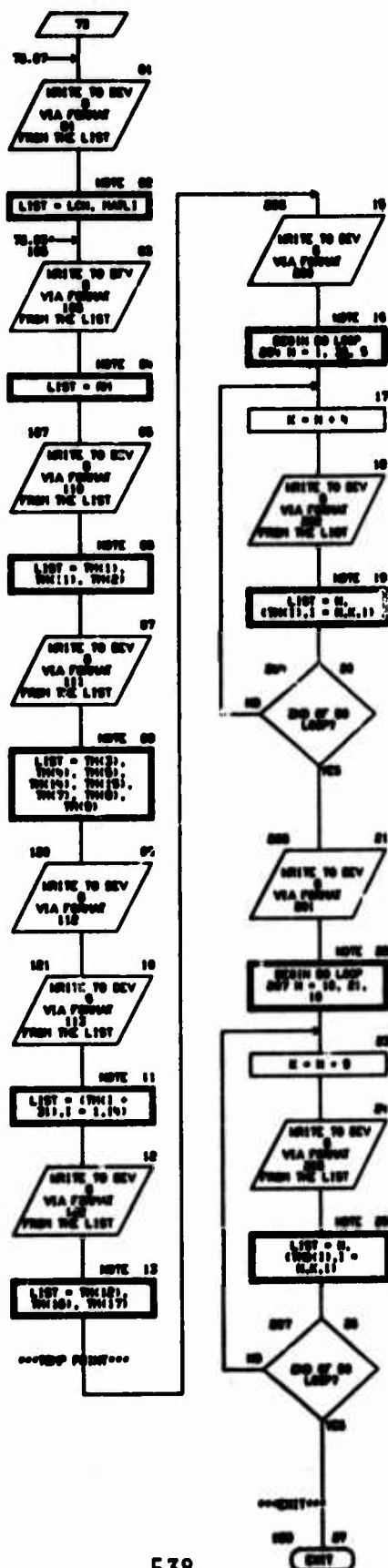
PAGE 75

GUNST TITLE - IMMEDIATELY CORRECT

oo  
CORRECTIVE FUELAGE  
oo

\*\*\*\*\*



**CHART TITLE - SUBMITTING NUMBER**



**DATA FILE - IMMEDIATELY OBTAIN**

\*\*\*\*\*  
**SUBMIT THE FORM**  
 \*\*\*\*\*

1. The first step in the process of identifying a problem is to recognize that a problem exists. This involves gathering information about the situation and identifying the specific issue that needs to be addressed.

2. Once a problem has been identified, the next step is to define the problem clearly. This involves determining the scope of the problem, the resources available, and the desired outcome.

3. The third step is to generate potential solutions. This involves brainstorming ideas and considering different approaches to solving the problem.

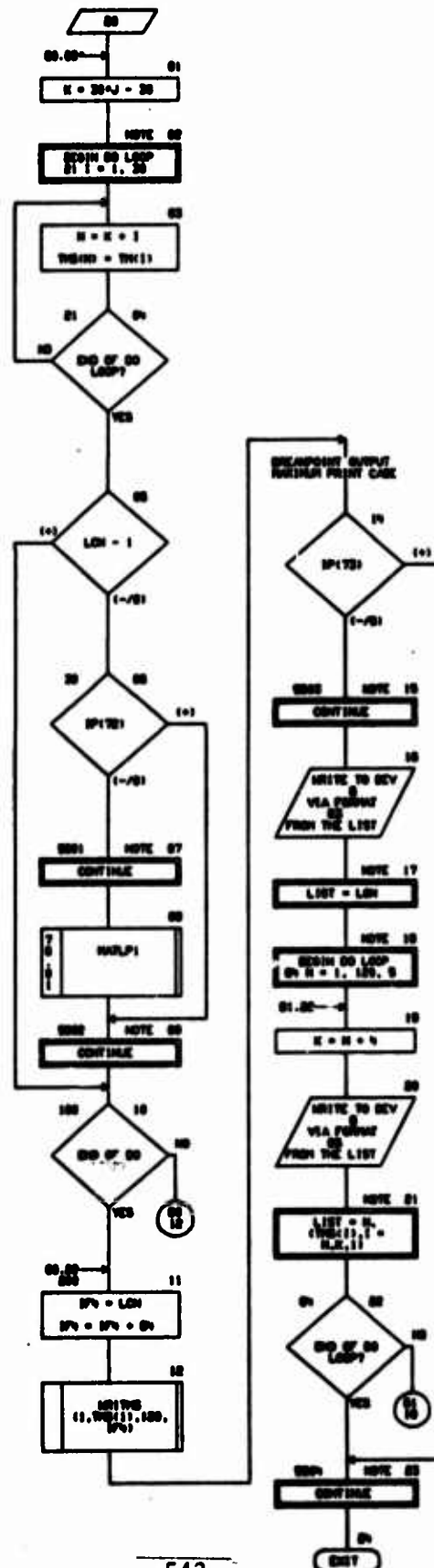
4. The fourth step is to evaluate the potential solutions. This involves comparing the benefits and costs of each solution and determining which one is the most feasible and effective.

5. The final step is to implement the chosen solution. This involves putting the solution into action and monitoring its progress to ensure that it is effective.





CHART TITLE - SUBROUTINE WCHNL



GAST TITLE - NON-FEDERAL STATEMENTS

```

GASTEN TOSTYV001
GASTEN /PRINT/SP1001
GASTEN /HSC/ HSC11001
CJHENSION 010001,T10001,EC11001,JB10001
GASTENION CND1001
GASTENION 0010001,WH10001,WH10001,TT1001
GASTENION WB1001
GASTVLENCE 0011,TOSTYV1111,(T1111,TOSTYV000111),HSC111,TOSTYV100111,
0011,TOSTYV00111
GASTVLENCE 001011,CND111
GASTVLENCE (T11001,001111),(T11001,WH1111),
(T11001,WH1111),(T11001,TT1111)
GASTVLENCE 0011001,WH1111
GASTVLENCE 001001,IF11,001011,IF11
GASTVLENCE 001001,001011,001001,001011
GASTVLENCE 001001,11,001001,001011,001001,001011,001011,001011,001011
GASTVLENCE 001111,LCN
110 FORM 1001 **HAR INPUT ERROR. ASSUMED HAR NO. 1.000 /HAR,1
3.70-1.70.11
100 FORM 1201 **HAR TEMPERATURE ERROR. HAR NO.74.1,01 HED.77.1
,001 HED. ASSUMED TOSTYV77.1,01 HED. 1
00 FORM1001,01,17001 HEDION LCN =,12,001.
GAST** HSCAL = 101701 **
00 FORM 101 H,12,0010.01

```

04/05/74

AIRPLANE MUST BEY - DEEP FIRST FUELING DELAY

PAGE 03

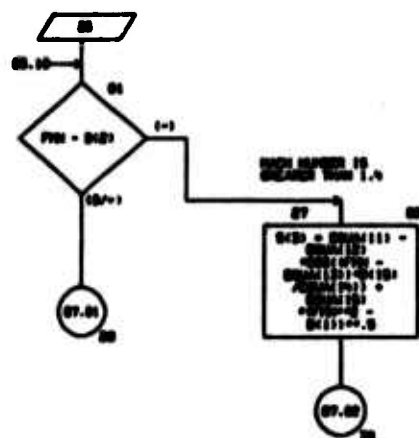
DATA TITLE - INTERVIEW RECORDS

RECORDING UNIT





**CHART TITLE - SIGNATURE CHIT**



GUST TITLE - SIGNATURE SCR17

INITIAL SET IS  
CREATED FROM GUSTAL  
TO 0.0

06.01  
06  
04  
 $GUST = 0.00000000 -$   
 $GUSTAL * 0.0$

CHECK CMT ARRAY FOR  
EXISTING OR INPUT  
INITIAL FLUTTER  
REGION

06.10  
06  
03  
02  
01

06.11  
06  
03  
02  
01

06.12  
06  
03  
02  
01

06.13  
06  
03  
02  
01

06.14  
06  
03  
02  
01

06.15  
06  
03  
02  
01

06.16  
06  
03  
02  
01

06.17  
06  
03  
02  
01

06.18  
06  
03  
02  
01

06.19  
06  
03  
02  
01

06.20  
06  
03  
02  
01

06.21  
06  
03  
02  
01

06.22  
06  
03  
02  
01

06.23  
06  
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01

06.24  
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06.25  
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06.26  
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06.27  
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06.28  
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06.29  
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06.30  
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06.31  
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01

06.32  
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02  
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06.33  
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INITIAL SET IS INPUT  
REMARKS ON CALCULATE  
GUST

07.00  
07  
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03  
02  
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07.01  
07  
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03  
02  
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07.02  
07  
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03  
02  
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07.03  
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02  
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07.04  
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03  
02  
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07.05  
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07.06  
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03  
02  
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07.07  
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03  
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07.08  
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07.09  
07  
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03  
02  
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07.10  
07  
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03  
02  
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07.11  
07  
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03  
02  
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07.12  
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03  
02  
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07.13  
07  
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07.14  
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07.15  
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07.16  
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07.17  
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07.18  
07  
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03  
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07.19  
07  
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03  
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07.20  
07  
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03  
02  
01

07.21  
07  
04  
03  
02  
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07.22  
07  
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03  
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07.23  
07  
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03  
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01

07.24  
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07.25  
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03  
02  
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07.26  
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03  
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07.27  
07  
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07.28  
07  
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03  
02  
01

07.29  
07  
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03  
02  
01

07.30  
07  
04  
03  
02  
01

CHECK IF E IS INPUT  
OR HAS BEEN COMPUTED

07.31  
07  
04  
03  
02  
01

07.32  
07  
04  
03  
02  
01

07.33  
07  
04  
03  
02  
01

07.34  
07  
04  
03  
02  
01

07.35  
07  
04  
03  
02  
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07.36  
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03  
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07.37  
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03  
02  
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07.38  
07  
04  
03  
02  
01

07.39  
07  
04  
03  
02  
01

07.40  
07  
04  
03  
02  
01

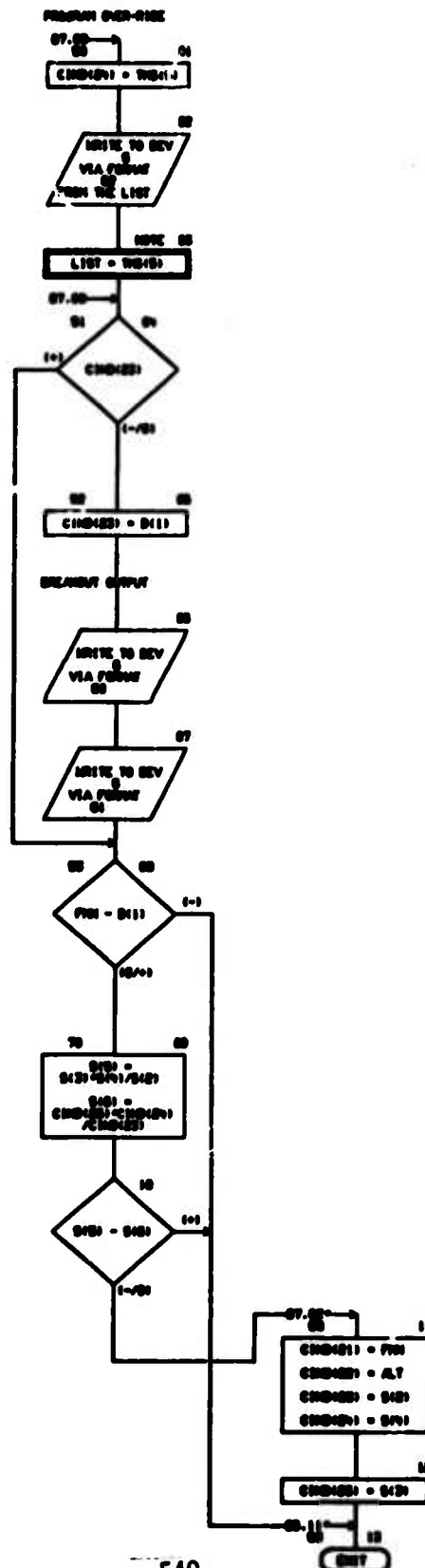
07.41  
07  
04  
03  
02  
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07.42  
07  
04  
03  
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01

07.43  
07  
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03  
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01

07.44  
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03  
02  
01

GWT TITLE - DERRATIVE GWT





GWT TITLE - NEW-PROBABLE START-CHTS

```

      GWTN TOWNV400)
      GWTN00N 010000),T10000),0C1100),J01000)
      GWTN00N 00M100)
      GWTN00N 010100)
      GWTN00N T00100)
      GWTN00N 01100)
      GWTN00N 01100),T00N11),T11),T00N00011),0C11),T00N1011),
      0011),T00N10011)
      GWTN00N 0101),00M11)
      GWTN00N 01011),01011)
      GWTN00N 01101),T011)
      GWTN00N T11),011)
      GWTN00N T012),01),T017),P001),T010),A1)
02  PERM1100,00N,00M** PROGRAM OVER-RIDE **
    //PER.110FLUTTER E =,P12.1)
03  PERM1100,10N,3=CHECK ON INPUT FLUTTER REM/RENT)
04  PERM1100,10N,00MATA ERROR 0 IS ZERO)

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04/25/74

APR/PLN QURY SET - QREP

FIRST PUBLAGE OVERLAY

PAGE 00

QURY TITLE - INTRODUCTORY COMMENTS

.....  
DERIVATIVE STATE  
.....



PAGE 17

**CHARTER FILE - NEW-CONTRIBUTOR STATEMENTS**[illegible]

PROGRAM LISTING  
OF  
FIRST FUSELAGE OVERLAY

04/05/74 INPUT LISTING ALUFLSH CHART SET - SHEEP FIRST FUELAGE OVERLAY  
FORTRAN MEDIAE (LIST,AUTOSB)

CARD NO	CONTENTS
1	C
2	C
3	C PROGRAM FUEL
4	C
5	C
6	C PROGRAM FUEL
7	C
8	C DIMEN TCM(400)
9	C
10	C DIMENSION D(200),Y(200),DC(100),ND(200)
11	C DIMENSION CND(100)
12	C DIMENSION PRES(20)
13	C
14	C EQUIVALENCE (D(1),TCM(1)),(Y(1),TCM(200)),(DC(1),TCM(410)),
15	C (ND(1),TCM(400))
16	C EQUIVALENCE (D(2),CND(1))
17	C EQUIVALENCE (D(100),PRES(1))
18	C EQUIVALENCE (D(111),NC), (ND(112),NC)
19	C EQUIVALENCE (D(117),LAW), (ND(122),ICST), (ND(125),INIL)
20	C EQUIVALENCE (D(127),ITVP)
21	C
22	C
23	C READIN IN
24	C
25	C BUFFER IN(4,1)(TCM(1),TCM(400))
26	C
27	C IF (UNIT(4)) 10,10,10
28	C
29	C CLEAR CORE *** DO NOT EQUIVALENCE 'I' ***
30	C 10 DO 10 1-1,400
31	C TCM(1) = 0.0
32	C 10 CONTINUE
33	C
34	C CALL READIN(1,1,1,2000,IN)
35	C
36	C *** NC = NUMBER OF CUTS NC = SHAPE INDICATOR ***
37	C LAW = CND(1)
38	C NC = CND(2)
39	C NC = CND(3)
40	C ICST = CND(4)
41	C INIL = CND(5)
42	C
43	C DO 40 1-1,NC
44	C IF (PRES(1)) 41,40,40
45	C 41 IF (CND(100) + PRES(1)) 42,40,40
46	C 40 CND(100) = - PRES(1)
47	C GO TO 43
48	C 40 CONTINUE
49	C
50	C 43 CONTINUE
51	C ITVP = 3
52	C
53	C IF (LAW - 20) 46,47,47
54	C
55	C 46 ITVP = 1
56	C GO TO 40
57	C
58	C 47 IF (LAW - 20) 48,40,40
59	C
60	C 48 ITVP = 2
61	C
62	C 40 CONTINUE
63	C
64	C GO TO 42,2,3,3,NC
65	C
66	C 2 CALL GDSF1
67	C CALL MERT1
68	C GO TO 12
69	C
70	C 3 CALL GDSF2







DATE	INPUT LISTING	ALUPLN CHART SET - SHEET	FIRST FUELAGE OVERLAY
CARD NO	CONTENTS		
013	CONTINUANCE (M(101),I),M(102),J),M(103),K),M(104),L),		70110170
014	M(105),N)		70110180
016	C		70110190
016	C		70110200
017	CONTINUANCE (T(201),XBAR(1)),T(201),DEL,X(1))		70110210
018	CONTINUANCE (M(201),X(1))		70110220
019	CONTINUANCE (M(201),M(1))		70110230
020	C CONTINUANCE SEARCH CRITERIA		70110240
021	C CONTINUANCE (M(101),I),M(102),J),M(103),K),M(104),L),		70110250
022	C M(105),N),M(106),N)		70110260
023	C		70110270
024	CONTINUANCE (M(111),M)		70110280
025	CONTINUANCE (T(11),S(11)),T(101),S(11)),T(141),S(11)),		70110290
026	T(101),S(11))		70110300
027	CONTINUANCE (M(1001),M(111)),M(1101),M(111))		70110310
028	C LOAD DATA		70110320
029	CONTINUANCE (M(110),P(1)),M(117),M(110),P(11)),		70110330
030	M(110),M(110))		70110340
031	C GEOMETRY DATA		70110350
032	CONTINUANCE (M(110),M(110))		
033	M(111) = M(110)		70110360
034	C M(110) STORED IN M(111) FOR FINAL OUTPUT IN PRINT		70110370
035	DO 4 J=1,20		70110370
036	M(11) = M(11)		70110380
037	CONTINUE		70110390
038	N = 1		70110400
039	IF (P(11),200,5		70110410
040	S(11) = M(11)		70110420
041	S(12) = M(11) - S(11)		70110430
042	S(13) = M(11) - S(12)		70110440
043	IF (M(11) - S(13)) 12,14,14		70110442
044	12 S(13) = M(11) - S(13)		70110444
045	14 S(14) = M(11)		70110446
046	S(15) = P(1)		70110448
047	S(16) = S(14)		70110450
048	L = 1		70110470
049	I = 1		70110480
050	IF (M(11) - S(14)) 7,8,8		70110480
051	7 I = I + 1		70110490
052	DO 10 K = 1		70110510
053	IF (I - 1) 9,10,10		70110520
054	9 I = I - 1		70110532
055	IF (I - 1,7, L) 14		70110534
057	10 IF (M(11) - S(13)) 11,15,15		70110536
058	11 K = K + 1		70110538
059	DO 16 K = 1		70110540
060	16 IF (K - L) 10,10,10		70110542
061	10 K = K + 1		70110544
062	IF (M(11) - S(13)) 17,10,10		70110546
063	17 K = L		70110548
064	L = L - 1		70110550
065	10 S(13) = M(11)		70110552
066	S(14) = S(14)		70110554
067	S(15) = S(14)		70110570
068	S(16) = S(14)		70110580
069	S(17) = S(14)		70110590
070	DO 20 J=L,1		70110600
071	S(11) = (M(11) - S(11))/S(11) - S(11)*M(11)		70110610
072	S(14) = S(14) + S(11)		70110620
073	S(15) = S(15) + S(11)*M(11)		70110630
074	DO CONTINUE		70110640
075	I = I + 1		70110650
076	DO 20 J=L,1		70110660
077	S(11) = (M(11) - M(11))/S(11) - S(11)*M(11)		70110670
078	S(14) = S(14) + S(11)		70110680
079	S(15) = S(15) + S(11)*M(11)		70110690
080	DO CONTINUE		70110700
081	I = I - 1		70110710
082	DO 20 J=L,1		70110720
083	S(11) = M(11)		70110730

DATE/74	INPUT LISTING	APPL/EN SHORT SET - 0000	FIRST PUBLICATION OVERLAY
DATE NO	****	COMMENTS	****
001	0401 = 0401 + 0410		70110700
002	0471 = 0471 + 0410*0401		70110700
003	41 00000000		70110770
004	I = 101		70110700
005	00 00 01 01		70110700
006	0410 = - 0410		70110000
007	0401 = 0401 + 0410		70110010
008	0471 = 0471 + 0410*0401		70110000
009	42 00000000		70110000
010	0410 = (0401 - 0401*0410)/(0401*0410) - 0401*0410		70110040
011	0410 = (0401*0410) - 0401*0410/(0401)		70110000
012	00 01 01 01		70110000
013	0410 = 0410 + 0410*0410 + 0410*0410		70110040
014	01 00000000		70110000
015	00 70 0000,0001,01		70110000
016	000 07 00000001,000,001		70110070
017	001 01 = 0		70110000
018	L = 1		70110000
019	002 07 000001 - 0000000,000,001		70110000
020	000 L = L+1		70110010
021	00 70 000		70110000
022	004 0410 = 0410-10		70110040
023	07 01 .LT. 01 0410 = 0410		70110040
024	0410 = 0410 - 0410		70110000
025	0410 = 0410 + 0410		70110000
026	07 00000001 - 0410 000,000,000		70110000
027	000 0410 = 0410-10		70110040
028	000 0410 = 0410		70110070
029	0410 = 0410		70110070
030	0410 = 0410		70110070
031	07 00000001 .LT. 0410 0410 = (0410 + 0410)/0410		70110070
032	I = L		70110000
033	00 70 0		70110000
034	000 00000000		70110010
035	C		70110000
036	RETURN		70110000
037	END		70110000
038	C		
039	C (*****)		
040	C SUBROUTINE FIVE		
041	C (*****)		
042	C		
043	C SUBROUTINE FIVE		70170010
044	C		70170000
045	C WRITTEN BY ROBERT 1071		70170000
046	C REARRANGE LINES ABOVE INTO FORM ACCEPTABLE FOR PAPER SYNTHESIS		70170000
047	C GIVEN TEMPERATURE		70170000
048	C GIVEN /P/0000/P/0000		
049	C		70170000
050	C DIMENSION D(1000),T(1000),JC(100),J0(1000)		70170070
051	C DIMENSION S(100),S1(100),S2(100),JFLD(1000)		70170000
052	C DIMENSION FIVE(100)		70170000
053	C DIMENSION C(1000)		70170100
054	C DIMENSION FIVE(10)		70170110
055	C DIMENSION TV(100),EZ(100),VE(10),JE(10)		70170110
056	C DIMENSION I(100),S0(100),I0(100)		70170100
057	C		70170100
058	C EQUIVALENCE (D(1),T(1000)),(T(1),T(1000)),(JC(1),T(1000)),		70170140
059	C (I(1),T(1000))		70170100
060	C		70170100
061	C EQUIVALENCE (T(1),S(1)),(T(100),S(100)),(T(1000),S(1000)),		70170170
062	C (I(1000),JFLD(1000))		70170100
063	C EQUIVALENCE (D(100),C(100)),C(100)		70170100
064	C EQUIVALENCE (D(100),FIVE(100))		70170000
065	C EQUIVALENCE (D(1000),FIVE(1000))		70170110
066	C EQUIVALENCE (D(100),FIVE(100)),FIVE(100),FIVE(100),FIVE(100),		70170000
067	C (FIVE(100),FIVE(100))		70170000
068	C EQUIVALENCE (D(100),S(100)),S(100),S(100),S(100),S(100),		70170000
069	C (S(100),S(100))		70170000
070	C EQUIVALENCE (D(100),S(100)),S(100),S(100),S(100),S(100),		70170000
071	C (S(100),S(100))		70170000
072	C EQUIVALENCE (D(100),S(100)),S(100),S(100),S(100),S(100),		70170000
073	C (S(100),S(100))		70170000
074	C EQUIVALENCE (D(100),S(100)),S(100),S(100),S(100),S(100),		70170000
075	C (S(100),S(100))		70170000
076	C EQUIVALENCE (D(100),S(100)),S(100),S(100),S(100),S(100),		70170000
077	C (S(100),S(100))		70170000
078	C EQUIVALENCE (D(100),S(100)),S(100),S(100),S(100),S(100),		70170000
079	C (S(100),S(100))		70170000

DATE/74	INPUT LISTING	AUTOFLEX START SET - SHEET	FIRST FUELAGE OVERLAY
CARD NO	CONTENTS		
265	DATAVALUE (M(101),1),M(102),J),M(103),K),M(104),L),		70470500
266	M(105),M),M(107),1),M(108),J),M(109),K)		70470500
267	DATAVALUE (M(114),LCH),M(115),MCC),		70470570
268	M(116),JPT),M(118),10),M(120),1C),M(121),M7),		70470500
269	M(122),MCC)		70470500
270	DATAVALUE (M(141),11(11),M(142),12(11),M(143),13(11))		70470500
271	10 = 0.41)		70470500
272	M7 = 10.4		70470500
273	1C = M7 + 1		70470540
274	DO 10 1-1,00		70470500
275	11(1) = 0.124)		70470500
276	12(1) = 0.124)		70470570
277	13(1) = 0.124)		70470500
278	01(1) = 0.124)		70470500
279	10 CONTINUE		70470540
279	M7 = 01		
279	CALL READMS(1,00(1),000,M7)		
279	DO 20 1-1,10		70470540
279	01(1) = 00(1)		70470540
279	20 CONTINUE		70470540
279	L = 1		70470540
279	I = 1		70470570
277	DO M7(1(1)) 30,30,31		70470540
278	30 I = I + 1		70470540
279	M7(1 - 10) 00,00,00		70470500
280	31 11(1) = 1		70470540
281	N = 1		70470500
282	K = 1 + 1		70470500
283	M7(K - 10) 30,30,40		70470540
284	30 00 40 J-K,10		70470500
285	M7(1(1) - 01(J)) 40,41,40		70470500
286	41 N = N + 1		70470570
287	01(J) = 0.124)		70470500
288	M7(N - 2) 40,42,43		70470500
289	42 12(1) = J		70470500
290	40 CONTINUE		70470540
291	DO 70 40		70470540
292	45 13(1) = J		70470500
293	40 L = L + 1		70470540
294	M7(1 - 10) 30,00,00		70470500
295	20 CONTINUE		70470500
296	L = L - 1		70470570
297	DO 000 N-1,L		70470500
298	DO 100 LCH+1,MCC		70470500
299	M7 = LCH + 00		
300	CALL READMS(1,00(1),000,M7)		
401	11 = 11(1)		70470700
402	JJ = 12(1)		70470700
403	KK = 13(1)		70470740
404	M7(LCH - 1) 71,71,00		70470700
405	71 F7L0(1) = 00(1)		70470700
406	F7L0(2) = 00(1)+10)		70470770
407	F7L0(3) = 0(2)		70470700
408	F7L0(4) = MCC		70470700
409	I = 1		70470700
410	17 = 11		70470700
411	70 VE(1) = 07(17)		70470704
412	ZE(1) = 02(17)		70470700
413	VE(1+1) = - VE(1)		70470700
414	ZE(1+1) = ZE(1)		70470707
415	M7(1-1) 74,74,70		70470700
416	74 M7(JJ) 00,00,77		70470700
417	77 I = 3		70470800
418	17 = JJ		70470804
419	DO 70 70		70470802
420	70 M7(1 - 3) 70,70,00		70470800
421	70 M7(KK) 00,00,00		70470804
422	00 I = 0		70470800
423	17 = KK		70470800
424	DO 40 70		70470807
425	00 J = 11		70470800





04/05/74	INPUT LISTING	AIRPLANE GURT SET - SHEP	FIRST FUELAGE OVERLAY
040 10	****	CONTENTS	****
000	00 0 1-1,15		70000000
000	00(1) = 0(04)		70000000
070	0 CONTINUE		70000010
071	0(00) = 0(04)		70000000
070	0(00) = 0(04)		70000000
070	0(01) = 0(04)		70000000
070	C LEC = CONDITION TYPE INDICATOR		70000000
070	C LEC = 1 BALANCED FLIGHT - FLAPS UP		70000000
070	C LEC = 2 BALANCED FLIGHT - FLAPS DOWN		70000070
077	C LEC = 3 2 WHEELS LANDING LEC = 4 VERTICAL LIFT		70000000
070	C LEC = 5 LATERAL GURT LEC = 6 PITCHING ACCELERATION		70000000
070	C LEC = 7 YAWING ACCELERATION LEC = 8 2 0 TAXI		70000000
000	IF LEC = 0 10,10,30		70000010
001	C LEC = 0 IS 20 TAXI CONDITION		70000000
000	10 0(1) = 00(7000)*AC1*(1000 - 1000)/(1000 - 1000)		70000000
000	0(01) = 00(7000)*AC1 - 0(1)		70000000
000	C CHECK FOR ERROR		70000000
000	IF 0(11) 100,10,10		70000000
000	C ERROR MESSAGE AIR VEHICLE DOES NOT BALANCE FOR TAXI		70000000
007	100 WRITE(0,100) 100,1000,1000		70000007
000	100 FORMAT(100,000,1000) DOES NOT BALANCE FOR TAXI, PER,		70000000
000	1 10000000 00 = 70.0,00,00-40 = 70.0,00,00-40 = 70.0		70000000
000	00 TO 00		70000000
001	10 0(1012) 100,00,00		70000070
000	C HERE GEAR LOADS		70000000
000	00 0(1000) 00,01,10		70000000
000	C THE TRAILER AND BRAS POINTS ARE GIVEN		70000070
000	01 00(40) = 0(01)*0(01)		70000070
000	00(01) = 00(40)		70000070
007	00(1) = 0(01)*10000 - 10000		70000070
000	00 TO 00		70000070
000	C THERE ARE SEPARATE FRAMES FOR TRAILER AND BRAS LOADS		70000070
000	00 00(40) = 0(01)*0(01)*10000 - 10000/10000 - 10000		70000070
001	00(01) = 00(40)		70000070
000	00(47) = 0(01)*0(01) - 00(40)		70000070
000	00(00) = 00(47)		70000070
000	00 TO 00		70000000
000	20 0(40) - 3) 70,40,70		70000010
000	C LEC = 3 IS TWO WHEELS LANDING CONDITION		70000000
007	40 0(1000) 41,01,40		70000000
000	41 WRITE(0,00)		70000000
000	00 FORMAT(100,310,40) ** TWO WHEELS LANDING - SINK SPEED IS 0.0 **		70000000
000	40 0(1000) 40,40,40		70000000
011	40 0(0) = 0(1)*0(0)		70000070
010	WRITE(0,01)		70000000
010	01 FORMAT(100,410,00) ** FREEM OVER RISE ** PER, 10000000		70000000
010	10000000 HAS 0.0 IS 10.0 INCHES		70000000
010	40 0(0) = 0(01)*0(01)*0(01)*0(01)*0(01) - 0(1)		70000010
010	0(1) = 00(7000) - PER - PER - PER - PER		70000000
017	0(01) = 0(1)*1000 - 10000 + PER*1000 - 10000 + PER*1000 - 10000 +		70000000
010	PER*1000 - 10000 + PER*1000 - 10000		70000000
010	0007 = 0(01)*0(01)*0(01)*0(01)*0(01)		70000000
000	0(1) = 0(01)*0(01)*0(01) - PER*1000 - 10000 + PER*1000 - 10000		70000000
001	C MAIN GEAR LOADS		70000070
000	00 0(1000) 00,01,00		70000000
000	C MAIN GEAR IS IN MAIN		70000000
000	01 0(00) = 0(1)		70001000
000	0(00) = 1000		70001010
000	0(01) = 1000		70001000
007	00 TO 70		70001000
000	C MAIN GEAR IS IN FUELAGE		70001000
000	00 0(1000) 00,00,00		70001000
000	C THE TRAILER AND BRAS POINTS ARE GIVEN		70001000
001	00 00(40) = 0(1)*0(01)		70001070
000	00(01) = 00(40)		70001000
000	00(10) = 0(1)*10000 - 10000		70001000
000	00(100) = 00(40)*10000 - 10000 + 10(10)		70001100
000	00(100) = - 00(100)		70001110
000	00 TO 70		70001100
007	C THERE ARE SEPARATE FRAMES FOR TRAILER AND BRAS LOADS		70001100
000	00 00(40) = 0(1)*0(01)*10000 - 10000/10000 - 10000		70001100

04/03/74	INPUT LISTING	AUTOPLOM GUEST SET - 0400	FIRST PUBLISHING OVERLAY
0000	0000	00000000	00000000
0001	0001	00010000	00010000
0002	0002	00020000	00020000
0003	0003	00030000	00030000
0004	0004	00040000	00040000
0005	0005	00050000	00050000
0006	0006	00060000	00060000
0007	0007	00070000	00070000
0008	0008	00080000	00080000
0009	0009	00090000	00090000
0010	0010	00100000	00100000
0011	0011	00110000	00110000
0012	0012	00120000	00120000
0013	0013	00130000	00130000
0014	0014	00140000	00140000
0015	0015	00150000	00150000
0016	0016	00160000	00160000
0017	0017	00170000	00170000
0018	0018	00180000	00180000
0019	0019	00190000	00190000
0020	0020	00200000	00200000
0021	0021	00210000	00210000
0022	0022	00220000	00220000
0023	0023	00230000	00230000
0024	0024	00240000	00240000
0025	0025	00250000	00250000
0026	0026	00260000	00260000
0027	0027	00270000	00270000
0028	0028	00280000	00280000
0029	0029	00290000	00290000
0030	0030	00300000	00300000
0031	0031	00310000	00310000
0032	0032	00320000	00320000
0033	0033	00330000	00330000
0034	0034	00340000	00340000
0035	0035	00350000	00350000
0036	0036	00360000	00360000
0037	0037	00370000	00370000
0038	0038	00380000	00380000
0039	0039	00390000	00390000
0040	0040	00400000	00400000
0041	0041	00410000	00410000
0042	0042	00420000	00420000
0043	0043	00430000	00430000
0044	0044	00440000	00440000
0045	0045	00450000	00450000
0046	0046	00460000	00460000
0047	0047	00470000	00470000
0048	0048	00480000	00480000
0049	0049	00490000	00490000
0050	0050	00500000	00500000
0051	0051	00510000	00510000
0052	0052	00520000	00520000
0053	0053	00530000	00530000
0054	0054	00540000	00540000
0055	0055	00550000	00550000
0056	0056	00560000	00560000
0057	0057	00570000	00570000
0058	0058	00580000	00580000
0059	0059	00590000	00590000
0060	0060	00600000	00600000
0061	0061	00610000	00610000
0062	0062	00620000	00620000
0063	0063	00630000	00630000
0064	0064	00640000	00640000
0065	0065	00650000	00650000
0066	0066	00660000	00660000
0067	0067	00670000	00670000
0068	0068	00680000	00680000
0069	0069	00690000	00690000
0070	0070	00700000	00700000
0071	0071	00710000	00710000
0072	0072	00720000	00720000
0073	0073	00730000	00730000
0074	0074	00740000	00740000
0075	0075	00750000	00750000
0076	0076	00760000	00760000
0077	0077	00770000	00770000
0078	0078	00780000	00780000
0079	0079	00790000	00790000
0080	0080	00800000	00800000
0081	0081	00810000	00810000
0082	0082	00820000	00820000
0083	0083	00830000	00830000
0084	0084	00840000	00840000
0085	0085	00850000	00850000
0086	0086	00860000	00860000
0087	0087	00870000	00870000
0088	0088	00880000	00880000
0089	0089	00890000	00890000
0090	0090	00900000	00900000
0091	0091	00910000	00910000
0092	0092	00920000	00920000
0093	0093	00930000	00930000
0094	0094	00940000	00940000
0095	0095	00950000	00950000
0096	0096	00960000	00960000
0097	0097	00970000	00970000
0098	0098	00980000	00980000
0099	0099	00990000	00990000

04/05/79	INPUT LISTING	COMMENTS	0000
0400 00	0000		
710	04171 = (100PM - 10000)*0.0 + (100PM - 10000)*0.00,5		70000000
711	04181 = 0411/0410		70000000
712	04191 = 0411/0410		70000000
713	04201 = 0411/0417		70000000
714	04211 = 04101 + 04101 + 04201		70000000
715	04221 = (104301 - 10000)*0.0 + (104311 - 10000)*0.00,5		70000070
716	04231 = (104301 - 10000)*0.0 + (104311 - 10000)*0.00,5		70000000
717	04241 = (104301 - 10000)*0.0 + (104311 - 10000)*0.00,5		70000000
718	04251 = 0411/0420		70000000
719	04261 = 0411/0420		70000000
720	04271 = 0411/0424		70000000
721	04281 = 04251 + 04261 + 04271		70000000
722	041101 = 0401*0411/0414 + 0401*0410/0401 + 0417*04201/04201		70000000
723	0 = 041001*TY101		70000000
724	041111 = 0401*0412/0414 + 0401*0410/0401 + 0417*04201/04201		70000000
725	0 = 041011*TY101		70000000
726	041121 = 0401*0413/0414 + 0401*0410/0401 + 0417*04271/04201		70000000
727	0 = 041021*TY171		70000000
728	041131 = - 041101		70000070
729	041141 = - 041111		70000000
730	041151 = - 041121		70000000
731	C HORIZONTAL TAIL LAMIN		70000000
732	041211 = 04121		70000010
733	041221 = 04121		70000000
734	041231 = 04121		70000000
735	041241 = 04121		70000000
736	041251 = 04121		70000000
737	0411 = (10000 + 0007/04201/04121)*10000 - 10001*FAC1		70000000
738	0412 = 0411*007 + P004FAC1		70000070
739	W(10000) 00,01,00		70000000
740	C HORIZONTAL TAIL IS ON VERTICAL OR DOES NOT EXIST		70000000
741	041211 = 0411*007		70000010
742	041221 = 10000		70000010
743	041231 = P004FAC1		70000000
744	041241 = 100PM		70000010
745	041251 = - 10000 + 1000*(1000 - 1000)*0.0007/04201/04121*FAC1		70000010
746	00 TO 00		70000000
747	C HORIZONTAL TAIL IS ON FUELAGE		70000000
748	04121 = (10000 + 10000)/04121		70000070
749	0412 = 0411*007*(04121 - 10000) - 10000 + 1000*(1000 - 1000)*0.00,5		70000000
750	1 0007/04201/04121*FAC1 + P004FAC1*(04121 - 100PM)		70000000
751	041231 = 0412/0412 + 0412/10000 - 10000/0412		70000000
752	041241 = 0412/0412 - 041231		70000010
753	041251 = 041231		70000000
754	041261 = 041241		70000000
755	W(10000) 00,00,04		70000070
756	C THERE IS A HORIZONTAL TAIL CARRY THRU REQUIRED - THE POINT		70000000
757	0413 = 0411*007/04121*(10000 - 10000)		70000070
758	0413 = P004FAC1/04121*(100PM - 10000)		70000070
759	0417 = (11000 - 10000)*0.0 + (11000 - 10000)*0.00,5		70000000
760	0418 = (11000 - 10000)*0.0 + (11000 - 10000)*0.00,5		70000000
761	0419 = 0411/0417		70000000
762	04101 = 0411/0410		70000010
763	04111 = 0419 + 04101		70000000
764	04121 = (1100PM - 10000)*0.0 + (1100PM - 10000)*0.00,5		70000000
765	04131 = (1100PM - 10000)*0.0 + (1100PM - 10000)*0.00,5		70000000
766	04141 = 0411/0410		70000000
767	04151 = 0411/0410		70000000
768	04161 = 04141 + 04151		70000070
769	041131 = 0401*0401/04111 + 0401*0414/0410		70000000
770	0 = 041031*TY101		70000000
771	041141 = 0401*04101/04111 + 0401*04101/0410		70000000
772	0 = 041041*TY101		70000000
773	041151 = -041131		70000000
774	041161 = -041141		70000000
775	00 TO 00		70000000
776	C THE HORIZONTAL TAIL IS SPINBLE MOUNTED AT HORIZ NEAR SPIN		70000000
777	04131 = 0411*007/04121*(10000 - 10000)		70000000
778	0413 = P004FAC1/04121*(100PM - 10000)		70000070
779	04141 = 0419 + 0410 + TY101*(041201 + 04101)		70000000
780	041201 = -041141		70000070



DATE/TM	INPUT LISTING	AIRPLAN Gantt SET - Gantt	FIRST FUELAGE OVERLAY
LINE NO	****	COMMENTS	****
701	C VERTICAL TAIL		7000700
702	100 07(1000) 100,100,101		7000700
703	01 0(1) = (-7000 + 0007/0(100)/0(101)*1000 - 1000)*7AC1		7000700
704	0(2) = 0(1)*.4 + 0(21) + 0(23)		7000700
705	0(3) = (1000 + 1000)/0(2)		7000700
706	0(4) = 0(1)*.42*0(23) - 1000 - (1000 + 1000)*1000 - 1000*0(2)		7000700
707	1 0007/0(100)/0(101)*7AC1 + 0(21)*0(23) + 0(23)		7000700
708	2 0(23)*0(23) - 0(23)*0(23)		7000700
709	0(100) = 0(21)*0(4) + 0(41)/(1000 - 1000)/0(2)		7000700
710	0(101) = 0(21)*0(2) - 0(100)		7000700
711	0(102) = 0(100)		7000700
712	0(103) = 0(100)		7000700
713	0(104) = PTV*7AC1*1000V - 1000/(1000 - 1000)/0(2)		7000700
714	0(105) = - PTV*7AC1*0(2) - 0(104)		7000700
715	0(106) = 0(105)		7000700
716	0(107) = 0(105)		7000700
717	0(108) = 0(111) 100,100,100		7000700
718	C THERE IS A VERTICAL GANTT TAIL REMOVED - THE POINT		7000700
719	01 0(1) = PTV*7AC1*1000V - 1000		7000700
720	0(102) = (1000V - 1000)*0(2) + (1000V - 1000)*0(2)*.5		7000700
721	0(103) = (1000V - 1000)*0(2) + (1000V - 1000)*0(2)*.5		7000700
722	0(104) = 0(11)/0(10)		7000700
723	0(105) = 0(104) + 0(10)		7000700
724	0(106) = - 0(104)*0(10)/0(10) + 0(10)*12(10)		7000700
725	0(107) = - 0(104)*0(10)/0(10) + 0(10)*12(11)		7000700
726	0(108) = 0(106)		7000700
727	0(109) = 0(106)		7000700
728	0(110) = 0(106)		7000700
729	0(111) = 0(110)		7000700
730	0(112) = 0(110)		7000700
731	C THE VERTICAL IS SPINLE HANDED AT VERTICAL REAR SPIN		7000700
732	01 0(100) = - PTV*7AC1*1000V - 1000 + 12(111)/0(2)		7000700
733	0(101) = 0(100)		7000700
734	C HORIZONTAL		7000700
735	100 07(1000) 100,100,101		7000700
736	01 0(1) = (-7000 + 0007/0(100)/0(101)*1000 - 1000)*7AC1		7000700
737	0(2) = 0(1)*.42		7000700
738	0(3) = (1000 + 1000)/0(2)		7000700
739	0(4) = 0(2)*0(23) - 1000 - (1000 + 1000)*1000 - 1000*0(2)		7000700
740	1 0007/0(100)/0(101)*7AC1		7000700
741	0(107) = 0(21)*0(4) + 0(41)/(1000 - 1000)/0(2)		7000700
742	0(108) = 0(21)*0(2) - 0(107)		7000700
743	0(109) = 0(107)		7000700
744	0(110) = 0(109)		7000700
745	0(111) = 0(109)		7000700
746	0(112) = (1000 - 1000)*0(2) + (1000 - 1000)*0(2)*.5		7000700
747	0(113) = (1000 - 1000)*0(2) + (1000 - 1000)*0(2)*.5		7000700
748	0(114) = 0(11)/0(1)		7000700
749	0(115) = 0(114) + 0(11)		7000700
750	0(116) = 0(114) + 0(11)/0(11) + 0(11)*12(11)		7000700
751	0(117) = 0(114) + 0(11)/0(11) + 0(11)*12(12)		7000700
752	0(118) = 0(114) + 0(11)/0(11) + 0(11)*12(13)		7000700
753	0(119) = - 0(117)		7000700
754	0(120) = - 0(118)		7000700
755	C THERE		7000700
756	100 07(1000) 100,100,101		7000700
757	01 0(1) = (-7000 + 0007/0(100)/0(101)*1000 - 1000)*7AC1		7000700
758	0(2) = 0(1)*.42		7000700
759	0(3) = (1000 + 1000)/0(2)		7000700
760	0(4) = 0(2)*0(23) - 1000 - (1000 + 1000)*1000 - 1000*0(2)		7000700
761	1 0007/0(100)/0(101)*7AC1		7000700
762	0(107) = 0(21)*0(4) + 0(41)/(1000 - 1000)/0(2)		7000700
763	0(108) = 0(21)*0(2) - 0(107)		7000700
764	0(109) = 0(107)		7000700
765	0(110) = 0(109)		7000700
766	0(111) = 0(109)		7000700
767	0(112) = (1000 - 1000)*0(2) + (1000 - 1000)*0(2)*.5		7000700
768	0(113) = (1000 - 1000)*0(2) + (1000 - 1000)*0(2)*.5		7000700
769	0(114) = 0(11)/0(1)		7000700
770	0(115) = 0(114) + 0(11)		7000700
771	0(116) = 0(114) + 0(11)/0(11) + 0(11)*12(11)		7000700







04/00/74	INPUT LISTING	ALPHAFLEX SHIRT SET - SHIRT	FIRST FUELAGE OVERLAY
CARD NO	*****	CONTENTS	*****
1005	0 01(11) = 01(10)		7007000
1006	01(12) = 1007		7007000
1007	01(13) = 1007		7007000
1008	01(14) = 1007		7007000
1009	01(15) = 1007		7007000
1070	02(1) = 2005		7007000
1071	02(2) = 2005		7007000
1072	02(3) = 2005		7007000
1073	02(4) = 2005		7007000
1074	02(5) = 2007		7007000
1075	02(6) = 2007		7007000
1076	02(7) = 2007		7007000
1077	02(8) = 2007		7007000
1078	02(9) = 2007		7007000
1079	02(10) = 2007		7007000
1080	02(11) = 2007		7007000
1081	02(12) = 2007		7007000
1082	02(13) = 2007		7007000
1083	02(14) = 2007		7007000
1084	02(15) = 2007		7007000
1085	00 20 1-1,15		7007000
1086	J = 1		7007000
1087	07(15) = 100,20,20		7007000
1088	00 07(15) = 00(1)10,11,11		7007000
1089	10 J = J-1		7007000
1090	00 10 20		7007000
1091	11 00(1)15 = J		7007000
1092	20 00(1)15		7007000
1093	00 00 1-1,15		7007000
1094	07(1) = 04(1)		7007000
1095	02(1) = 04(1)		7007000
1096	07(1) = 04(1)		7007000
1097	02(1) = 04(1)		7007000
1098	J = 00(1)15		7007000
1099	07(1) = 11 00,01,00		7007000
1100	C FROM 15 IN FIRST ELEMENT		7007000
1101	04 01(1) = 20(1)		7007000
1102	04(2) = 00(1)		7007000
1103	04(3) = 00(1)		7007000
1104	04(4) = 00(1)		7007000
1105	00 10 07		7007000
1106	00 04(1) = 00(1) - 00(1)11(1) - 00(1)11		7007000
1107	04(1) = 20(1)11 + 00(1)11 - 20(1)11(1)15		7007000
1108	04(2) = 00(1)11 + 00(1)11 - 00(1)11(1)15		7007000
1109	04(3) = 00(1)11 + 00(1)11 - 00(1)11(1)15		7007000
1110	04(4) = 00(1)11 + 00(1)11 - 00(1)11(1)15		7007000
1111	07 04(1) = 00(1)11 - 04(1)		7007000
1112	04(1) = 00(1)11 + 04(1)11(1)15		7007000
1113	04(1) = 04(1)11(1)15		7007000
1114	07(1)15 = 07. 0.0000 04(1) = 1.0		7007000
1115	07(1)15 = 07. -0.0000 04(1) = -1.0		7007000
1116	00(1)15 = 00(1)15		7007000
1117	04(1) = 04(1) + 04(1)		7007000
1118	04(1) = 04(1) + 04(1)		7007000
1119	K = 0		7007000
1120	04(1) = 04(1)15		7007000
1121	04(1) = 04(1)		7007000
1122	07(1)15 = 04(1)15 - 04(1)15		7007000
1123	C 00(1)15 = 00(1)15		7007000
1124	00 K = 1		7007000
1125	04(1) = 04(1)15 - 04(1)		7007000
1126	04(1) = - 04(1)		7007000
1127	00 04(1) = 04(1)15 + 04(1)15(1)15		7007000
1128	04(1) = 04(1)15 + 04(1)15(1)15		7007000
1129	07(1)15 = 04(1)15 - 04(1)15		7007000
1130	C LOAD ALONG HORIZONTAL PLAT		7007000
1131	02 02(1) = 04(1)		7007000
1132	07(1)15 = 00(1)15(1)15		7007000
1133	00 10 10		7007000
1134	00 07(1)15 = 04(1)15(1)15		7007000
1135	C LOAD IS ALONG VERTICAL PLAT		7007000



DATE	INPUT LISTING	AUTOPLOT SHORT SET - DEEP	FIRST PUEBLA OVERLAY
CARD NO	CONTENTS		
1007	2P(1) = Z(1) - PB(12)		7000000
1008	K = 2*10 + 1		7000000
1009	DO 10 I=1,K		7000070
1010	Q(10) = Y(10) - Y(1-1)		7000000
1011	Q(10) = Z(10) - Z(1-1)		7000000
1012	Q(10) = (Q(10)*Q + Q(10)*Q)*.5		7000000
1013	Q(13) = PB(10)/Q(2)		7000010
1014	WP(1) = Y(1) + Q(13)*Q(10)		7000000
1015	2P(1) = Z(1) - Q(13)*Q(10)		7000000
1016	DO CONTINUE		7000000
1017	K = 2*10		7000000
1018	J = 4*10 + 2		7000000
1019	DO 12 I=1,K		7000070
1020	WK = J-I		7000000
1021	WP(WK) = -WP(1)		7000000
1022	2P(WK) = 2P(1)		7000000
1023	DO CONTINUE		7000000
1024	DO 11 I=1,107		7000000
1025	WP(I) = (WP(10) + WP(1))/Q(2)		7000000
1026	2P(I) = (2P(10) + 2P(1))/Q(2)		7000000
1027	QLP(I) = ((WP(10) - WP(1))*Q + (2P(10) - 2P(1))*Q)*.5		7000000
1028	DO CONTINUE		7000000
1029	AREA = Q(4)		7000070
1030	C DETERMINE RING AND SHELL SECTION PROPERTIES		7000000
1031	DO 2 I=1,107		7000000
1032	Q(2) = Q(2) + QLS(I)		7000000
1033	Q(3) = Q(3) + 2Q(1)*QLS(I)		7000010
1034	Q(4) = Q(4) + WB(I)*QLS(I)		7000000
1035	AREA = AREA + ABS(Y(10-1)*Q(2) - Y(1)*Q(10-1)/Q(2))		7000000
1036	Q(5) = Q(5) + QLP(I)		7000000
1037	Q(6) = Q(6) + 2P(I)*QLP(I)		7000000
1038	Q(7) = Q(7) + WB(I)*QLP(I)		7000000
1039	DO CONTINUE		7000070
1040	ZZ5 = Q(3)/Q(2)		7000000
1041	DO 3 I=1,107		7000000
1042	Q(6) = Q(6) + (2P(I) - ZZ5)*QLS(I)		7000000
1043	Q(6) = Q(6) + (2P(I) - ZZ5)*QLP(I)		7000010
1044	DO CONTINUE		7000000
1045	C CALCULATE INTERNAL RING LOAD AND STRESS FOR EACH CONDITION		7000000
1046	DO 100 L=1,100		7000070
1047	C CLEAR SEARCH REGION		7000000
1048	DO 7 I=1,30		7000000
1049	Q(1) = Q(4)		7000000
1050	DO CONTINUE		7000010
1051	DO 11 I=1,10		7000000
1052	Q(1) = Q(4)		7000000
1053	W(1) = Q(4)		7000000
1054	A(1) = Q(4)		7000000
1055	QW(1) = Q(4)		7000000
1056	IF ALN = 1) 9,9,11		7000070
1057	C CLEAR NET LOADS FIRST CONDITION ONLY FOR SITUATION OF NO		7000000
1058	C EXTERNAL LOADS		7000000
1059	Q(10) = Q(4)		7000000
1060	W(1) = Q(4)		7000010
1061	A(1) = Q(4)		7000000
1062	DO CONTINUE		7000000
1063	C RUN VERTICAL, LATERAL, AND TORQUE DUE TO EXTERNAL FORCES		7000000
1064	DO 14 K=1,107		7000000
1065	J = LCM(10) + K*4 - 25		7000000
1066	Q(10) = Q(10) + PFL(J-1)		7000070
1067	Q(11) = Q(11) + PFL(J-2)		7000000
1068	Q(12) = Q(12) + PFL(J-1)*K*WK - PFL(J-2)*K*WK - ZZ5		7000000
1069	Q(13) = PFL(J-3)		7000000
1070	DO CONTINUE		7000010
1071	C TEST ON EXTERNAL LOADS, IF ZERO INITIALIZE FRAME FOR FIRST		7000000
1072	C CONDITION ONLY - OTHERWISE EXIT		7000000
1073	IF Q(10) = Q(11) = Q(12) = 0,10,00		7000000
1074	DO 15 ALN = 1) 9,9,10,10		7000000
1075	DO 16 ALN = 100,9,9,9		7000000
1076	C DETERMINE SHEAR FLUX DUE TO VERTICAL AND LATERAL FORCES		7000000
1077	DO 20 I=1,10		7000070

LINE NO	INPUT LISTING	AUTOFLEX SHIRT SET - SHIRT	FIRST PULSAGE OVERLAY
1070	GO TO 1-1.1		70001000
1071	$Q(1) = Q(1) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001000
1072	$Q = Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001000
1073	20 CONTINUE		70001100
1074	20 CONTINUE		70001100
1075	C THE BEAR FLAT DERIVED ABOVE IS IN ORDER FOR HORIZONTAL FORCES		70001100
1076	C AND IS UNBALANCED CORRECTION IS REQUIRED		70001100
1077	GO TO 1-1.17		70001100
1078	$Q(10) = Q(10) + Q(1) + Q(10)/Q(10) * (V(10) - 1) * V(10)$		70001100
1079	$Q(10) = Q(10) + Q(1) + Q(10)/Q(10) * (V(10) - 1) * V(10)$		70001100
1080	20 CONTINUE		70001100
1081	C Q(10) IS THE UNBALANCED TORSION		70001100
1082	$Q(10) = - Q(10) + Q(10)/Q(10) * AREA$		70001100
1083	C BEAR FLAT AT TOP CENTER IS DUE ONLY TO THE TORSION BALANCE		70001100
1084	GO TO 1-1.1C		70001100
1085	$Q(1) = Q(1) + Q(10)$		70001100
1086	20 CONTINUE		70001100
1087	C DETERMINE STATIC RING LOADS AT THE NEEDS DUE TO EXTERNAL FORCES		70001100
1088	GO TO 1-1.1C		70001100
1089	GO TO 1-1.1		70001100
1090	$Q(17) = Q(17) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1091	$Q(10) = - Q(10) + Q(10)/Q(10) * (V(10) - 1) * V(10)$		70001100
1092	$V(1) = V(1) + Q(17)$		70001100
1093	$A(1) = A(1) + Q(10)$		70001100
1094	$Q(17) = Q(17) + Q(10)/Q(10) * (V(10) - 1) * V(10)$		70001100
1095	20 CONTINUE		70001100
1096	GO TO 1-1.1PT		70001100
1097	$J = L(10) * K(10) - Z(10)$		70001100
1098	$IF (J) = 0, GO TO 1-1.1$		70001100
1099	$V(1) = V(1) + F(10)/J$		70001100
1100	$A(1) = A(1) + F(10)/J$		70001100
1101	$Q(17) = Q(17) + F(10)/J * (V(10) - 1) * V(10)$		70001100
1102	$Q(10) = Q(10) + F(10)/J * (V(10) - 1) * V(10)$		70001100
1103	20 CONTINUE		70001100
1104	GO TO 1-1.1PT		70001100
1105	$J = L(10) * K(10) - Z(10)$		70001100
1106	$IF (J) = 0, GO TO 1-1.1$		70001100
1107	$V(1) = V(1) + F(10)/J$		70001100
1108	$A(1) = A(1) + F(10)/J$		70001100
1109	$Q(17) = Q(17) + F(10)/J * (V(10) - 1) * V(10)$		70001100
1110	20 CONTINUE		70001100
1111	C DETERMINE REBARMENTS		70001100
1112	GO TO 1-1.17		70001100
1113	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1114	$Q(10) = Q(10) + Q(10)$		70001100
1115	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1116	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1117	20 CONTINUE		70001100
1118	$Q(10) = - Q(10)/Q(10)$		70001100
1119	$Q(10) = - Q(10)/Q(10)$		70001100
1120	$Q(10) = - Q(10)/Q(10)$		70001100
1121	GO TO 1-1.17		70001100
1122	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1123	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1124	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1125	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1126	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1127	$Q(10) = Q(10) + Q(10)/Q(10) * (Z(10) - 1) * Z(10)$		70001100
1128	20 CONTINUE		70001100
1129	C BEARPOINT OUTPUT MAXIMUM PRINT CASE		70001100
1130	$IF (J) = 0, GO TO 1-1.1$		70001100
1131	20 CONTINUE		70001100
1132	WRITE(10,10) L(10)		70001100
1133	GO TO 1-1.1		70001100
1134	WRITE(10,10)		70001100
1135	GO TO 1-1.1		70001100
1136	WRITE(10,10)		70001100
1137	WRITE(10,10)		70001100
1138	GO TO 1-1.1		70001100



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DATE	INPUT LISTING	ASDFLEX UNIT SET - 0000	FIRST PUEBLA OVERLAY
DATE	CONTENTS	CONTENTS	
1968	100 0401 = 0401 + 04111		70100000
1969	00 70 000		70100000
1970	100 04101 = 04111 + 0401/04101		70100070
1971	K = 0070/04101		70100000
1972	07001 100,100,100		70100000
1973	100 04101 = 0401/04101		70100000
1974	Y(1) = 0401 + 04101*000004101		70100010
1975	Z(1) = 0401 + 04101*000004101		70100000
1976	0401 = 04111 + 0401		70100000
1977	I = 1+1		70100000
1978	00 70 000		70100000
1979	100 04101 = 0401/04101		70100000
1980	04101 = 04101		70100070
1981	04101 = 0401/04101		70100000
1982	Y(1) = 0401 + 04101*000004101		70100000
1983	Z(1) = 0401 + 04101*000004101		70100070
1984	K = 0+1		701000710
1985	I = 1+1		70100070
1986	00 100 J=1,X		70100070
1987	04101 = 04101 + 04101		70100070
1988	Y(1) = 0401 + 04101*000004101		70100070
1989	Z(1) = 0401 + 04101*000004101		70100070
1990	100 00070000		70100070
1991	I = 0+1		70100070
1992	0401 = 04101/0401 + 04101*04101		70100070
1993	00 0700011 100,100,100		70100000
1994	000 0401 = 0401 + 0401		70100010
1995	04101 = 0401 + 0401/04101		70100000
1996	K = 04101		70100000
1997	07001 100,100,100		70100000
1998	000 Y(1) = 0401 + 04101		70100000
1999	Z(1) = 0401 + 0401		70100000
2000	K = 0+1		70100070
2001	I = 1+1		70100000
2002	00 000 J=1,X		70100000
2003	Y(1) = 0401 + 04101		70100000
2004	Z(1) = 04101 + 0401		70100010
2005	000 00070000		70100000
2006	0401 = 04101		70100000
2007	K = 00 + 1		70100000
2008	Y(1) = 0401 + 04101		70100000
2009	Z(1) = 04101		70100000
2010	001(1) = 04101		70100000
2011	001(1) = 0401/0401		70100000
2012	J = K - 1		70100000
2013	00 000 1-0,J		70100070
2014	0401 = (Y(1)*0401 + Z(1)*0401)*0		70100000
2015	001(1) = 000042111/0401/04101		70100000
2016	000 00070000		70100000
2017	K = 0+00 + 2		70100010
2018	00 000 1-1,10		70100000
2019	K = 0-1		70100000
2020	001(1) = 0401 + 0401		70100000
2021	Y(1) = Y(1)		70100000
2022	Z(1) = -Z(1)		70100000
2023	001 00070000		70100070
2024	K = 0+00 + 1		70100000
2025	00 000 1-1,10		70100000
2026	K = 0-1		70100000
2027	001(1) = 0401 + 0401		70100000
2028	Y(1) = -Y(1)		70100000
2029	Z(1) = -Z(1)		70100000
2030	000 00070000		70100000
2031	K = 0+00 + 2		70100000
2032	00 000 1-1,10		70100000
2033	K = 0-1		70100000
2034	001(1) = 0401 + 0401		70100000
2035	Y(1) = -Y(1)		70100000
2036	Z(1) = Z(1)		70100000
2037	000 00070000		70100000
2038	00 000 1-1,07		70100000







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LINE NO	INPUT LISTING	CONTENT	*****
1046	VELT = D(24)		70000070
1047	C		70000080
1048	C STRAIGHT LINE INTERPOLATION		70000090
1049	YOT(10) = D(11)		70000100
1050	YOT(20) = D(11)		70000110
1051	DO IF(ND4-J-2(11))D1,J1,20		70000120
1052	D1 D(11) = (ND4-J - 2(11-1))/((2(11-1)-2(11-1)))		70000130
1053	D1(J) = D(11-1) + D(11)*D(11-1)-D(11-1)		70000140
1054	D2(J) = D(11-1) + D(11)*D(11-1)-D(11-1)		70000150
1055	PER(J) = P(11-1) + D(11)*P(11-1)-P(11-1)		70000160
1056	ND4(J) = 2(11-1) + D(11)*2(11-1)-2(11-1)		70000170
1057	IF(YOT(10) - D1(J)) 31,32,33		70000180
1058	31 YOT(10) = D1(J)		70000190
1059	32 IF(YOT(20) - D2(J)) 33,34,35		70000200
1060	33 YOT(20) = D2(J)		70000210
1061	34 CONTINUE		70000220
1062	J = J+1		70000230
1063	IF(J-ND100,20,100)		70000240
1064	DO 1 = 1+1		70000250
1065	DO TO 20		70000260
1066	C		70000270
1067	C SHAPE FIT		70000280
1068	DO 20 DO J=1,NC		70000290
1069	D(11) = D(11)		70000300
1070	D(2) = (D(2)*D(1,J) + D(2)*D(2,J) - PER(J)/D(2) - D(2)*D(10))		70000310
1071	IF(D(2))101,101,102		70000320
1072	101 D(11) = PER(J)/D(2)*D(1,J) + D(2)*D(1,J)		70000330
1073	D(2) = D(2)		70000340
1074	C		70000350
1075	C ERROR MESSAGE		70000360
1076	WRITE(6,50) J,D(11)		70000370
1077	DO FORMAT(20) WARNING FROM GEOF/20 SHAPE IS RECT.,EX.		70000380
1078	(70000390,13,EX,13)CORRECTION IS,FO,3)		70000390
1079	DO TO 110		70000400
1080	102 D(4) = D(4)*D(1,J)+D(1,J)		70000410
1081	D(5) = D(4)*D(1,J)+D(1,J)		70000420
1082	IF(D(5) - D(2)*D(2)/100,100,110)		70000430
1083	103 D(2) = D(5)/D(2)		70000440
1084	D(11) = PER(J)/D(2)*D(1,J)+D(1,J) + D(4)*D(2)		70000450
1085	C		70000460
1086	C ERROR MESSAGE		70000470
1087	WRITE(6,50) J,D(11)		70000480
1088	DO FORMAT(20) WARNING FROM GEOF/20 SHAPE IS NO,JOED RECT.,EX.		70000490
1089	(70000500,13,EX,13)CORRECTION IS,FO,3)		70000500
1090	110 D(5) = (D(2)*D(2)/D(2)*D(11)/D(2)		70000510
1091	D(2) = (D(1,J) - D(2)*D(2)/D(11)/D(2)		70000520
1092	IF(D(5))111,112,112		70000530
1093	111 D(5) = D(2)		70000540
1094	112 IF(D(2))114,115,115		70000550
1095	114 D(2) = D(2)		70000560
1096	115 ND4(J) = D(5)		70000570
1097	ND4(J) = D(2)*D(11)		70000580
1098	ND4(J) = D(2)		70000590
1099	D(1) = D(1)*D(1,J)+D(1,J) + D(4)*D(2)*D(1,J)+D(1,J) +		70000600
1100	D(1) = D(1)*D(1,J)+D(1,J)		70000610
1101	D(1) = D(1)*D(1,J) + D(1)*D(2)*D(1,J)		70000620
1102	D(1) = D(1)		70000630
1103	D(1) = D(1)*D(1,J) + D(1)*D(2)*D(1,J)		70000640
1104	IF(D(2)-ND4(J))116,116,200		70000650
1105	116 D(11) = ND4(J)*D(11) - D(1)*D(2)		70000660
1106	D(2) = ND4(J)*D(11)/D(2) + ND4(J)		70000670
1107	D(2) = ND4(J)*D(11)/D(2) + ND4(J)		70000680
1108	ND4(J) = (D(11)*D(2) + D(2)*D(11)/D(2)/D(11)		70000690
1109	ND4(J) = ND4(J)		70000700
1110	ND4(J) = (D(11)*D(2) + D(2)*D(11)/D(2)/D(11)		70000710
1111	C		70000720
1112	IF D(2.0) ABOVE RADII OF CURVATURE IS INFINITY IE FLAT PANEL		70000730
1113	DO CONTINUE		70000740
1114	C		70000750
1115	C MORE CODE GEOMETRY		70000760
1116	D(11) = P(11)/D(2)/D(1)		70000770
1117	D(2) = PER(J)/D(2)/D(1)		70000780



[illegible]

DATE/NO	INPUT LISTING	AUTOFLEX SHIRT SET - SHARP	FIRST FUELAGE OVERLAY
CARD NO	****	COMMENTS	****
1000	DIMENSION XEAR(20),XELX(20),XOD(20),XO(20),PER(20)		70000100
1000	DIMENSION UHX(20),UHY(20),UIZ(20)		70000100
1000	C		70000140
1001	EQUIVALENCE (S(1),TCOM(1)), (T(1),TCOM(200)), (SC(1),TCOM(401)),		70000100
1002	(H(1),TCOM(401))		70000100
1003	C		70000170
1004	EQUIVALENCE (T(1),S(1))		70000100
1005	EQUIVALENCE (H(1),JC)		70000100
1006	EQUIVALENCE (H(1),J)		70000000
1007	EQUIVALENCE (T(20),XEAR(1)), (T(20),XELX(1)), (T(40),XOD(1)),		70000200
1008	(T(40),XO(1)), (T(40),PER(1))		70000200
1009	EQUIVALENCE (T(20),UHX(1)), (T(20),UHY(1)), (T(20),UIZ(1))		70000240
1010	EQUIVALENCE (S(23),P(1))		70000000
1011	EQUIVALENCE (S(20),XO(1))		70000000
1012	C		70000000
1013	C DESCRIPTION OF GEOMETRY ARRAYS (REF SUB. GEDF1)		70000270
1014	C SELX = SEGMENT LENGTH XEAR = SEGMENT COORDINATE		70000000
1015	C PER = PERIMETER AT CUT ODO = FLAT/E VERTICAL		70000000
1016	C HO = FLAT/E HORIZONTAL RO = CORNER RADIUS		70000300
1017	C XI = STATIONS - INPUT GEDH (1) = NOSE (10) = TAIL		70000310
1018	C		70000300
1019	C DESCRIPTION OF INPUT ARRAYS		70000330
1020	C PI = PERIMETER IF S(43) = JC = 2, PI INPUT = PI AND PI		70000340
1021	C HAS BEEN REVISED TO PERIMETER IN SUBROUTINE GEDF1		70000300
1022	C		70000300
1023	C DESCRIPTION OF OUTPUT ARRAYS		70000370
1024	C UHX = UNIT ROLL INERTIA UHY = UNIT PITCH INERTIA		70000300
1025	C UIZ = UNIT YAW INERTIA		70000300
1026	C		70000400
1027	C NOSE CODE		70000410
1028	S(1) = P(1)/S(2)/S(15)		70000400
1029	S(2) = PER(1)/S(2)/S(15)		70000430
1030	S(3) = XO(1) - XEAR(1)		70000440
1031	UHX(1) = S(3)/S(10)*S(11)**2 + S(11)**2*S(2) + S(11)**2*S(2)**2 +		70000400
1032	S(11)*S(2)**2 + S(2)**2/S(11)**2 + S(11)*S(2) + S(2)**2		70000401
1033	UHY(1) = UHX(1)/S(2) + S(3)/S(10)/S(10)*S(11)**2		70000400
1034	UIZ(1) = UHY(1)		70000470
1035	DO 200 J=2,JC		70000400
1036	IF SELX(J) = S(2) XEAR(J),XELX(J),XOD(J)		70000400
1037	C		70000000
1038	C SHARP DISCONTINUITY IN GEOMETRY		70000510
1039	DO 1 S(4) = S(4)/S(4)*S(1004(J)+RO(J)) + S(4)/RO(J)*S(204(J) +		70000000
1040	RO(J)*RO(J)**2		70000000
1041	S(5) = S(4)/S(2)*S(4)*S(1004(J)+RO(J))**2 + S(4)/S(2)*RO(J)*		70000040
1042	S(1004(J)**2 + S(10)/S(4)*RO(J)**2 + S(10)*RO(J)**2*S(1004(J)**2		70000000
1043	S(6) = S(4)/S(2)*S(1004(J)+RO(J)*RO(J))**2 + S(4)/S(2)*RO(J)*		70000200
1044	RO(J)**2 + S(10)/S(4)*RO(J)**2 + S(10)*RO(J)**2*S(1004(J)**2		70000070
1045	DO UHX(J) = (S(5) + S(6))/S(4)		70000000
1046	UHY(J) = S(5)/S(4) + SELX(J)**2/S(4)		70000000
1047	UIZ(J) = S(6)/S(4) + SELX(J)**2/S(4)		70000000
1048	GO TO 200		70000210
1049	C		70000000
1050	C NORMAL GEOMETRY TRANSITION		70000000
1051	C USE NORMAL SEGMENT SHAPE		70000040
1052	DO 1 S(1) = (S(204(J) + S(204(J-1))/S(2)		70000000
1053	S(2) = RO(J) + RO(J-1)/S(2)		70000000
1054	S(3) = (RO(J) + RO(J-1))/S(2)		70000070
1055	S(4) = S(4)/S(2)*S(2)*S(11)*S(3) + S(4)/S(2)*S(11) + S(10)*S(3)**2		70000000
1056	S(5) = S(4)/S(2)*S(2)*S(11)*S(3)**2 + S(4)/S(2)*S(2)*S(11)**2 +		70000000
1057	RO(J)/S(4)*S(3)**2 + S(10)/S(4)*S(3)**2*S(11)**2		70000700
1058	S(6) = S(4)/S(2)*S(11)*S(2)*S(3)**2 + S(4)/S(2)*S(2)*S(2)**2 +		70000710
1059	RO(J)/S(4)*S(3)**2 + S(10)/S(4)*S(3)**2*S(2)**2		70000700
1060	GO TO 200		70000730
1061	END CONTINUE		70000740
1062	C		70000700
1063	C TAIL CODE		70000700
1064	J = JC		70000770
1065	S(1) = PER(J)/S(2)/S(15)		70000700
1066	S(2) = P(10)/S(2)/S(15)		70000700
1067	S(3) = XEAR(J-1) - XO(J)		70000000
1068	UHX(J) = S(3)/S(10)*S(11)**2 + S(11)**2*S(2) + S(11)**2*S(2)**2 +		70000010

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04/02/74      INPUT LISTING      AUTOFLN SHORT SET - BEEP      FIRST FAILURE OVERLAY

CARD NO      ****      COMMENTS      ****

0000      1 0(11)*0(1)**0 + 0(12)*0(1)/0(11)**0 + 0(11)*0(1) + 0(12)*0(1)      7000011
0001      WTY(J-1) = WTY(J-1)/0(12) + 0(13)*0(1)/0(10)*0(13)**0      7000000
0002      WTY(J-1) = WTY(J-1)      7000000
0003      RETURN      7000000
0004      END      7000000

0005      C
0006      C #####
0007      C SUBROUTINE MERTS
0008      C #####
0009      C
0010      SUBROUTINE MERTS      7000010
0011      C SUBROUTINE FOR UNIT INERTIA FOR ELLIPTICAL SHAPES      7000000
0012      C
0013      GIVEN TOWN(4*00)      7000000
0014      C
0015      DIMENSION D(0000),T(0000),SC(100),JD(000)      7000000
0016      C
0017      EQUIVALENCE (D(1),TOWN(1)),(T(1),TOWN(0001)),(SC(1),TOWN(101)),      7000000
0018      (JD(1),TOWN(401))      7000000
0019      C
0020      RETURN      7000000
0021      END      7000000

0022      C
0023      C #####
0024      C SUBROUTINE MARF
0025      C #####
0026      C
0027      SUBROUTINE MARF      MARF0010
0028      C MARL PROP. FIT SUBR      MARF0000
0029      C
0030      C ***REVISION--00-01-00--ADD MARL. PROP. TITLE. ***      MARF0000
0031      C REVISION -- 01-11-00 -- NEW LOGIC, LANGUAGE, NO PRINT OR NONE      MARF0000
0032      C
0033      C
0034      C
0035      C
0036      C
0037      C
0038      C
0039      C
0040      C
0041      C
0042      C
0043      C
0044      C
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DATE/TIME	INPUT LISTING	AUTOFLEX DWT SET - DEEP	FIRST FUELAGE OVERLAY
CARD NO	CONTENTS		
0130	IFB.1.2M.20TEMPERATURE IS BEYOND RANGE OF TABLE./10K.		
0131	0130END. TDP. =J7.1.2M.10LAST TDP. =J7.11		
0132	GO TO 105		
0133	100 KA = KA - 20		
0134	WRITE(6,51) TT(1),TT(2),TND(KA+20)		
0135	100 KB = KA + 20		
0136	GO 121 1-1.25		
0137	TH(100) = TH(100)		
0138	121 TH(100) = TH(100)		
0139	TT(3) = (TH(100) - TT(2))/(TH(100) - TH(100))		NAF7040
0140	GO 122 1-1.25		NAF7040
0141	TH(100) = TH(100) + TT(3)*(TH(100) - TH(100))		NAF7040
0142	122 CONTINUE		NAF70510
0143	C		NAF70500
0144	C ***PROCESS BASIC DATA***		NAF70530
0145	120 TH(1) = TT(2)		NAF70540
0146	127 TH(2) = TH(3)		NAF70550
0147	TH(11) = TH(2)		NAF70560
0148	TH(12) = TH(3)		NAF70570
0149	TH(13) = TH(4)		NAF70580
0150	TH(14) = TH(3)/TH(2)		NAF70590
0151	TH(15) = TH(2)		NAF70600
0152	TH(16) = TH(4)/TH(2)		NAF70610
0153	TH(17) = TH(4)		NAF70620
0154	TH(18) = TH(3)		NAF70630
0155	TH(19) = TH(4)		NAF70640
0156	IF (TH(12)) 131,131,132		NAF70650
0157	131 TH(12) = TH(10)		NAF70660
0158	132 TH(16) = TH(17)		NAF70670
0159	IF (TH(16)) 133,133,134		NAF70680
0160	133 TH(16) = TH(12)/TH(2)		NAF70690
0161	134 TH(17) = TH(16)		NAF70700
0162	IF (TH(17)) 135,135,136		NAF70710
0163	135 TH(17) = TH(2)*TH(6)		NAF70720
0164	136 TH(18) = TH(16)		NAF70730
0165	TH(19) = TH(18)		NAF70740
0166	TH(20) = TH(18)		NAF70750
0167	C		NAF70760
0168	C ***FIT DATA N=1 COMP.. N= TDS.		NAF70770
0169	140 N = 1		NAF70780
0170	GO 141 1-1.7		NAF70810
0171	TT(100) = TH(100)		NAF70820
0172	141 CONTINUE		NAF70830
0173	C		NAF70840
0174	142 TT(6) = TT(6)		NAF70850
0175	TT(16) = (TT(16) - TT(6))/TH(4)		NAF70860
0176	TT(7) = TT(6) + TT(16)		NAF70870
0177	TT(8) = TT(7)+TT(16)		NAF70880
0178	TT(9) = TT(8)+TT(16)		NAF70890
0179	TT(10) = TT(11)/TT(16)		NAF70900
0180	TT(16) = TH(1)/TT(16)		NAF70910
0181	TT(17) = TT(16) - TT(16)*TT(16)		NAF70920
0182	C		NAF70930
0183	C ***DO PT(1,2,3), (1,3,5), (1,4,5)***		NAF70940
0184	143 GO 100 N=1,3		NAF70950
0185	THK(115) = TH(4)		NAF70960
0186	TT(16) = TT(16) - TT(16)*TT(16)		NAF70970
0187	TT(16) = TT(16) - TT(16)*TT(16)		NAF70980
0188	C		NAF70990
0189	144 THK(112) = ALB(TT(17)/TT(16))/TT(16)		NAF71000
0190	THK(100) = EXP(ALB(TT(16)) - TT(16)*THK(112))		NAF71010
0191	C		NAF71020
0192	C		NAF71030
0193	145 TT(20) = TH(1)/TT(16) + THK(100)*THK(112)*EXP(THK(112)*TT(11))		NAF71040
0194	TT(21) = TH(1) - TT(20)*TT(16)		NAF71050
0195	THK(115) = TT(21)/TT(21)		NAF71060
0196	GO 146 1-1.5		NAF71070
0197	TT(22) = TT(16)*TT(100) + THK(100)*EXP(THK(112)*TT(100))		NAF71080
0198	TT(23) = TH(1) - TT(22)/TT(16)		NAF71090
0199	THK(115) = THK(115) + TT(23)*TT(23)		NAF71100
0200	146 CONTINUE		NAF71110

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04/08/74      INPUT LISTING      AUTOFLEX SHIRT SET - SHIRT      FIRST FUELAGE OVERLAY
040 10      ****      COMMENTS      ****
0001      C
0002      C      **TEST CURVE **
0003      147 0F42 - 01 140,140,140
0004      140 0F (THK+110) - TT(14) 140,100,100
0005      140 TT(24) = THK+110
0006      140 TT(3) = THK+100
0007      140 TT(4) = THK+110
0008      100 CONTINUE
0009      C
0010      C      **TEST FOR TENSION OR COMPRESSION FIT**
0011      150 0F00 - 11 101,101,103
0012      101 01 - 2
0013      101 01 = TT(3)
0014      101 01 = TT(4)
0015      00 102 1-1,7
0016      101 01 = TH(1+20)
0017      100 CONTINUE
0018      00 TO 140
0019      C
0020      C      **TENSION. NONE BEFORE EXIT**
0021      153 0F07 = TT(3)
0022      101 01 = TT(4)
0023      C
0024      C
0025      C
0026      C      EXIT
0027      100 RETURN
0028      000
0029      C
0030      C
0031      C      SUBROUTINE MARLP1
0032      C
0033      C
0034      C      SUBROUTINE MARLP1
0035      C      MARL PREP. PRINT SUB
0036      C      **REVISION--00-01-00--ADD MARL PREP TITLE PRINT **
0037      C      01-00-00 -- NEW SUB--AA-014 FORME
0038      C
0039      C
0040      C
0041      C      GIVEN TCM(400)
0042      C
0043      C      DIMENSION B(2000),T(2000),SC(100),JD(200)
0044      C      DIMENSION TD(200),TH(100),RH(10)
0045      C
0046      C      EQUIVALENCE (B(1),TCM(1)),(T(1),TCM(2001)),(SC(1),TCM(4001)), MARL000
0047      C      (TD(1),TCM(4001))
0048      C      EQUIVALENCE (T(100),TD(1)),(T(1001),TH(1)),(TD(400),RH(1)) MARL000
0049      C      EQUIVALENCE (TD(10),JPAKE), (TD(100),JPAKE)
0050      C      EQUIVALENCE (TD(101),J), (TD(100),J), (TD(100),J), (TD(100),J) MARL000
0051      C      EQUIVALENCE (TD(114),LOH)
0052      C
0053      C
0054      C      **PRINT TITLES**
0055      100 0F4J - 11 101,101,104
0056      101 WRITE(6,100) LOH,MARL1
0057      00 TO 100
0058      100 FORMATTED,EX,WEAK,N,215,200--OVER MATERIAL DATA. MARL NO.,
0059      C      1 12,00--,,12,200 MARLP1 - 0F4J **
0060      100 FORMATTED,EX,WEAK,N,215,200--UNDER MATERIAL DATA. MARL
0061      C      NO.,12,00--,, EX,200 MARLP1 - 0F4J **
0062      00 FORMATTED,EX,WEAK,N,215,200--HAIR FINE MATERIAL DATA. MARL
0063      C      1 NO.,12,00--,, EX, 200 MARLP1 - 0F4J **
0064      01 FORMATTED,EX,WEAK,N,215,200--HAIR FINE MATERIAL DATA. MARL
0065      C      1 NO.,12,00--,, EX,200 MARLP1 - 0F4J **
0066      104 0F4J - 01 70,70,71
0067      70 WRITE(6,100) LOH,MARL1
0068      00 TO 100
0069      71 0F4J - 01 70,70,70
0070      70 WRITE(6,100) LOH,MARL1
0071      00 TO 100

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LINE NO	INPUT LISTING	AVIATION SHORT SET - SHEET	FIRST PUBLICATION
LINE NO	***	CONTENTS	***
0001	00 FORM 1 IN 11,12,13,14,15		
0002	01 CONTINUE		
0003	02 CONTINUE		
0004	03 RETURN		
0005	04 END		
0006	C		
0007	C *****		
0008	C SUBROUTINE SCR17		
0009	C *****		
0010	C		
0011	C SUBROUTINE SCR17	7010010	
0012	C SUBROUTINE TO SETUP CRITICAL PANEL FLUTTER PARAMETERS	7010020	
0013	C	7010030	
0014	C GIVEN TOWN4000	7010040	
0015	C	7010050	
0016	C DIMENSION S(1000),T(1000),DC(100),AD(1000)	7010060	
0017	C DIMENSION CDM(100)	7010070	
0018	C DIMENSION CND(100)	7010080	
0019	C DIMENSION TWD(100)	7010090	
0020	C DIMENSION S(100)	7010100	
0021	C	7010110	
0022	C EQUIVALENCE (S(1),TOWN4000),(T(1),TOWN2000),(DC(1),TOWN4000),	7010120	
0023	C (AD(1),TOWN4000)	7010130	
0024	C EQUIVALENCE (CDM(1),CDM(1))	7010140	
0025	C EQUIVALENCE (CND(1),CND(1))	7010150	
0026	C EQUIVALENCE (TWD(1),TWD(1))	7010160	
0027	C EQUIVALENCE (S(1),S(1))	7010170	
0028	C ***** SEARCH LOCATIONS S(1),S(17) AND S(10) USED AS ARGUMENTS *****	7010180	
0029	C EQUIVALENCE (S(1),S(1),S(17),TOWN,(S(10),ALT))	7010190	
0030	C	7010200	
0031	C S(1) = TWD(1)	7010210	
0032	C S(17) = S(1)	7010220	
0033	C S(10) = ALT/100	7010230	
0034	C S(1) = S(1) + 0.5	7010240	
0035	C ALTITUDE IS LESS THAN OR EQUAL TO 2000 FEET	7010250	
0036	C S(1) = TOWN4000/CDM(1) - CDM(2)*S(1) + CDM(3)*S(1)**2	7010260	
0037	C GO TO 10	7010270	
0038	C S(17) = S(17) + 0.5	7010280	
0039	C ALTITUDE IS LESS THAN OR EQUAL TO 2000 FEET	7010290	
0040	C S(1) = TOWN4000/CDM(1) - CDM(2)*S(1) + CDM(3)*S(1)**2	7010300	
0041	C GO TO 10	7010310	
0042	C ALTITUDE IS GREATER THAN 2000 FEET	7010320	
0043	C S(1) = TOWN4000/CDM(1) + 0.5	7010330	
0044	C TEST FOR MAXIMUM SEA LEVEL SPEED AND MAXIMUM DYNAMIC PRESSURE	7010340	
0045	C 10 IF(ALT) 11,11,10	7010350	
0046	C 11 IF(CND(1)) - FROM 10,10,10	7010360	
0047	C 12 CND(10) = FROM	7010370	
0048	C 13 IF(CND(17)) - CND(12) 10,17,17	7010380	
0049	C 14 CND(17) = CND(12)	7010390	
0050	C 15 IF(CND(17)) - S(1) 10,20,20	7010400	
0051	C 16 CND(17) = S(1)	7010410	
0052	C 17 IF(TOWN - S(1)) 21,20,20	7010420	
0053	C 21 IF(CND(12)) - S(1) 20,20,20	7010430	
0054	C 22 IF(TOWN - CDM(13)) 20,20,20	7010440	
0055	C FROM NUMBER IS GREATER THAN 1 BUT LESS THAN OR EQUAL TO 1.4	7010450	
0056	C S(1) = CDM(1) + CDM(10)*TOWN - S(1)**2	7010460	
0057	C GO TO 20	7010470	
0058	C 20 IF(TOWN - S(1)) 27,20,20	7010480	
0059	C FROM NUMBER IS GREATER THAN 1.4	7010490	
0060	C S(1) = CDM(1) + CDM(10)*CDM(17) - CDM(13)*S(1)/CDM(14) +	7010500	
0061	C CDM(10)*TOWN**2 - S(1)**2	7010510	
0062	C GO TO 20	7010520	
0063	C FROM NUMBER IS GREATER THAN OR EQUAL TO 2.0	7010530	
0064	C S(1) = TOWN**2 - S(1)**2	7010540	
0065	C CHECK CND ARRAY FOR EXISTING OR INPUT CRITICAL FLUTTER RECORD	7010550	
0066	C 20 IF(CND(1)) - S(1) 20,20,20	7010560	
0067	C 21 IF(CND(12)) 21,21,20	7010570	
0068	C INITIAL SET TO INPUT REQUIREMENT CALCULATE BETA	7010580	
0069	C 21 IF(CND(1)) - CDM(13) 20,20,20	7010590	



DATE	INPUT LISTING	ALUPLN CHRT SET - DEEP	FIRST PUEBLA OVERLAY
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FORTRAN MODULE SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

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(000124)	5.16	154	(000121)	5.12
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(000103)	5.04	112		
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(000150)	7.05	181		
(000157)	7.06	185	(000154)	7.04
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(000220)	8.08	400	(000174)	9.05
(000027)	8.09	410	(000203)	10.01
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(000170)	9.01	250	(000200)	9.00
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CHART TITLE - INTRODUCTORY COMMENTS

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(000428)	18.12	115	(000425)	18.10	
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(000447)	19.07	214	(000444)	19.05	
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(000450)	19.09	218	(000447)	19.07	
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(000578)	25.15	202	(000570)	25.13								
(000581)	25.17	310										
(000582)	25.18	315	(000580)	25.16								
(000589)	25.22	200										
(000592)	25.23	205	(000588)	25.21								
(000594)	25.25	208										
(000598)	25.28	217	(000591)	25.22	(000593)	25.24						
(000599)	25.28	210										
(000601)	25.29	215	(000597)	25.27								
(000603)	25.31	220										
(000605)	27.01	230	(000602)	25.30								
(000607)	27.02	235	(000600)	25.29	(000604)	25.31						
(000608)	27.03	300										
(000609)	27.04	305	(000607)	27.02								
(000611)	27.06	23	(000610)	27.05	(000610)	27.05						
(000612)	27.07	45	(000625)	27.13								
(000614)	27.08	24	(000610)	27.05								
(000616)	27.10	40	(000615)	27.09								
(000621)	27.12	41										
(000624)	27.13	42	(000620)	27.11								
(000626)	27.14	50	(000615)	27.09								
(000628)	27.15	30	(000615)	27.09	(000623)	27.12						
(000631)	27.16	00	(000610)	27.05								

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FEED

(000641)	30.01	FEED	(001225)	53.03-X
(000680)	30.03	000	(000680)	30.02
(000703)	30.10	020		
(000705)	30.12	021	(000702)	30.09
(000709)	30.15		(000700)	30.13
(000711)	30.16	030	(000709)	30.20
(000719)	30.19	031		
(000720)	30.20	032	(000710)	30.10
(000721)	31.01	040	(000710)	30.10
(000722)	31.02	041		

04/10/74			TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP			
CAPO ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)					
(000723)	31.03	700	(000721)	31.01				
(000727)	31.05	710						
(000729)	31.06	800	(000606)	30.02	(000726)	31.04		
(000734)	31.09	71						
(000737)	31.12	72						
(000740)	31.13	74	(000736)	31.11				
(000742)	31.14	75	(000733)	31.08	(000739)	31.12		
(000743)	31.15	76						
(000745)	31.17	77						
(000748)	31.18	79	(000744)	31.16				
(000750)	31.19	80	(000742)	31.14	(000747)	31.17		
(000753)	31.22	90						
(000757)	32.01	95	(000752)	31.21				
(000760)	32.02	98	(000756)	31.22				
(000767)	32.06	101						
(000768)	32.07	102	(000766)	32.05				
(000762)	32.12	121						
(000764)	32.15		(000763)	32.13				
(000765)	32.16	130						
(000766)	32.17	131						
(000769)	32.20		(000768)	32.18				
(000780)	32.20	150	(000761)	32.11	(000764)	32.15	(000765)	32.16
(000794)	32.22	171						
(000796)	33.01	180	(000793)	32.21				
(000798)	33.02	185	(000795)	32.22				
(000802)	33.04	186						
(000804)	33.05	240	(000801)	33.03				
(000810)	33.09	241						
(000811)	33.10	250	(000809)	33.08				
(000813)	33.12	251						
(000816)	33.13	260	(000812)	33.11				
(000819)	33.15	261						
(000822)	33.17	265	(000820)	33.16				
(000825)	33.19	266						
(000826)	33.20	280	(000820)	33.16	(000824)	33.18		
(000827)	33.22		(000826)	33.20				
(000829)	33.23	290						
(000829)	33.24	291						
(000833)	33.27		(000831)	33.25				
(000834)	33.27	300	(000818)	33.14	(000827)	33.22	(000828)	33.23
(000838)	33.30	301						
(000840)	33.31	302	(000837)	33.29				
(000849)	33.34	311						
(000851)	34.01	312	(000848)	33.33				
(000854)	34.02	315	(000850)	33.34				
(000857)	34.04	316						
(000858)	34.05	320	(000856)	34.03				
(000865)	34.08	321						
(000866)	34.10	330	(000864)	34.08				
(000868)	34.12	331						
(000871)	34.13	340	(000867)	34.11				
(000874)	34.15	341						
(000876)	34.17	345						
(000878)	34.19	346						
(000880)	34.20	360	(000875)	34.16	(000878)	34.18		
(000881)	34.22		(000880)	34.20				
(000882)	34.23	361						
(000883)	34.24	363						
(000886)	34.27		(000885)	34.25				
(000887)	34.27	400	(000873)	34.14	(000881)	34.22	(000882)	34.23
(000894)	34.30	421						
(000896)	35.03		(000895)	35.01				
(000897)	35.04	423						
(000898)	35.05	425						
(000902)	35.08		(000900)	35.06				
(000903)	35.08	500	(000893)	34.28	(000896)	35.03	(000897)	35.04
(000908)	35.09	505						
(000910)	35.10	507	(000873)	37.17	(000876)	37.18		
(000917)	35.13	510	(000915)	35.12				
(000921)	35.01	520	(000919)	35.13				
(000923)	35.02	530						
(000926)	35.04	539						



CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)
(000970)	36.05	900	(000925) 36.03 (000963) 37.13
(000976)	36.06	940	(000926) 36.04
(000980)	36.08	901	(000970) 36.05
(000931)	36.09	942	(000929) 36.07
(000936)	37.01	944	(000929) 36.07
(000937)	37.02	945	
(000940)	37.03	946	(000936) 37.01
(000942)	37.04	947	(000939) 37.02
(000943)	37.05	948	
(000945)	37.06	949	(000942) 37.04
(000949)	37.07	950	(000926) 36.04 (000935) 36.10
(000955)	37.10	995	
(000956)	37.11	100	(000934) 37.09
(000961)	37.12	970	(000957) 37.10
(000964)	37.14	971	
(000969)	37.16	972	
(000974)	37.18	974	(000960) 37.15
(000985)	38.01	950	(000970) 36.05
(000987)	38.03	953	
(000988)	38.04	955	(000986) 38.02
(000989)	38.05	956	
(000990)	38.06	957	(000988) 38.04
(000991)	38.07	958	
(000992)	38.08	960	(000986) 38.02 (000990) 38.06
(000994)	38.10	963	
(000995)	38.11	965	(000993) 38.09
(000996)	38.12	966	
(000997)	38.13	967	(000995) 38.11
(000998)	38.14	968	
(000999)	38.15	970	(000993) 38.09 (000997) 38.13
(001004)	38.18	1000	(000992) 36.08

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FCOVER

(001013)	41.01	FCOVER	(001320) 52.07-X
(001040)	41.03	20	(001047) 41.02
(001052)	41.04	30	(001047) 41.02
(001056)	41.05	40	(001050) 41.03
(001058)	41.07	41	
(001060)	41.08	50	(001094) 41.04 (001057) 41.06
(001066)	41.11	70	(001066) 41.10
(001075)	42.01	75	(001066) 41.10
(001080)	42.02	80	(001073) 41.12
(001087)	42.05	85	(001085) 42.04
(001090)	42.06	90	(001085) 42.04
(001092)	42.08	91	
(001094)	42.10	92	
(001095)	42.11	94	
(001097)	42.12	96	(001094) 42.10
(001100)	42.13	100	(001091) 42.07 (001093) 42.09 (001096) 42.11
(001109)	42.17	150	(001105) 42.16
(001114)	43.01	151	(001112) 42.19
(001121)	43.04	180	(001105) 42.16 (001112) 42.19
(001123)	43.06	181	
(001124)	43.07	182	(001122) 43.05
(001125)	43.08	185	
(001127)	43.09	200	(001124) 43.07
(001128)	43.10	201	
(001129)	43.11	250	(001127) 43.09
(001132)	43.13	251	
(001133)	43.14	252	(001131) 43.12
(001134)	43.15	253	
(001135)	43.16	260	(001133) 43.14
(001136)	43.17	261	
(001137)	43.18	262	(001135) 43.16
(001138)	43.19	263	
(001139)	43.20	270	(001137) 43.18

04/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 7						
CARD ID	PAGE/BOX	NAME	REFERENCES	(SOURCE SEQUENCE NO. AND PAGE/BOX)								
(001140)	43.21	271										
(001141)	43.22	272	(001139)	43.20								
(001142)	43.23	273										
(001144)	43.24	400	(001120)	43.10	(001141)	43.22						
(001146)	43.26	401										
(001149)	44.01	411	(001147)	43.27								
(001151)	44.02	412	(001147)	43.27								
(001163)	44.06	421										
(001164)	44.07	422	(001162)	44.05								
(001165)	44.08	423										
(001166)	44.09	430	(001164)	44.07								
(001167)	44.10	431										
(001168)	44.11	432	(001166)	44.09								
(001169)	44.12	433										
(001170)	44.13	440	(001168)	44.11								
(001171)	44.14	441										
(001172)	44.15	442	(001170)	44.13								
(001173)	44.16	443										
(001175)	44.17	500	(001145)	43.25	(001172)	44.15						
(001177)	44.18	501	(001175)	44.17								
(001180)	44.21	502										
(001190)	44.22	504	(001187)	44.20								
(001193)	44.23	510	(001189)	44.21								
(001195)	44.25	512										
(001198)	44.26	515	(001194)	44.24								
(001200)	44.28	517										
(001203)	44.29	520	(001199)	44.27								
(001205)	45.01	522										
(001208)	45.02	525	(001204)	44.30								
(001217)	45.05	550										
(001218)	45.07		(001217)	45.05								
(001219)	45.09		(001218)	45.07								
(001220)	45.11		(001219)	45.09								
(001221)	45.13		(001220)	45.11								
(001222)	45.15		(001221)	45.13								
(001223)	45.17		(001222)	45.15								
(001224)	45.17	700	(001175)	44.17								
(001226)	45.19	720										
(001232)	45.21	740	(001227)	45.18								
CHART TITLE - NON-PROCEDURAL STATEMENTS												
CHART TITLE - INTRODUCTORY COMMENTS												
CHART TITLE - SUBROUTINE FICMB												
(001250)	48.01	FICMB	(001323)	53.01-X								
CHART TITLE - NON-PROCEDURAL STATEMENTS												
CHART TITLE - INTRODUCTORY COMMENTS												
CHART TITLE - SUBROUTINE FPANEL												
(001267)	51.01	FPANEL	(002494)	95.12-X								
(001267)	51.03	100										
(001301)	51.04	200	(001266)	51.02								
(001269)	51.05	101	(001267)	51.03								
(001293)	51.07	150	(001267)	51.03								
(001303)	51.08	201	(001301)	51.04								
(001295)	51.09	151	(001293)	51.07								
(001298)	52.01	152	(001293)	51.07								
(001306)	52.02	250	(001301)	51.04								
(001310)	52.03	300	(001304)	51.08	(001296)	51.09	(001332)	53.07	(001337)	53.12	(001340)	53.13
(001313)	52.05	301	(001311)	52.04								
(001310)	52.06	400	(001308)	52.01	(001300)	52.02	(001311)	52.04	(001315)	52.05		
(001320)	52.07	410	(001310)	52.06								
(001323)	53.01	420	(001310)	52.06								
(001324)	53.02	500	(001321)	52.08								
(001327)	53.05	050										
(001328)	53.06	051										

CARD 10 PAGE/BOX NAME REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)

(001371)	93.00	1000	(001375)	93.04	(001374)	93.11
(001333)	93.10	092	(001377)	93.05		
(001375)	93.12	093				
(001330)	93.13	094	(001374)	93.11		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PUSHL

(001371)	95.01	PUSHL	(000020)	2.04-X
(001373)	95.02		(001374)	95.03
(001374)	95.03	2		
(001370)	95.06		(001370)	95.07
(001370)	95.07	5		
(001303)	95.10		(001304)	95.11
(001304)	95.11	10		
(001305)	95.13		(001415)	97.05
(001303)	95.16	40	(001301)	96.15
(001305)	95.18	50	(001301)	96.15
(001300)	95.19	70	(001304)	95.17
(001400)	95.21	90		
(001401)	95.22	91	(001300)	95.20
(001404)	95.24	9001		
(001410)	95.20		(001413)	97.03
(001413)	97.03	00		
(001414)	97.04	9002	(001403)	96.23
(001415)	97.05	100		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PUEIGH

(001401)	00.01	PUEIGH	(001417)	97.00-X
(001510)	00.00	10	(001500)	00.00
(001514)	00.11	15	(001512)	00.10
(001510)	00.12	20	(001512)	00.10
(001542)	01.07	30		
(001543)	01.08	40	(001541)	01.00
(001540)	01.11	100	(001500)	00.00
(001504)	01.12		(001744)	00.27
(001502)	01.13	101	(001500)	01.12
(001500)	01.16	103	(001507)	01.15
(001502)	01.17	110	(001507)	01.15
(001577)	02.01	200	(001550)	01.12
(001500)	02.03	201		
(001503)	02.04	210	(001570)	02.02
(001504)	02.05	211		
(001505)	02.06	212	(001503)	02.04
(001506)	02.07	213		
(001507)	02.08	215	(001505)	02.00
(001500)	02.09	216		
(001500)	02.10	220	(001507)	02.00
(001500)	02.11	202		
(001501)	02.12	204	(001500)	02.10
(001502)	02.13	205		
(001503)	02.14	230	(001502)	02.03
(001500)	02.16	235	(001507)	02.00
(001001)	02.17	240	(001501)	02.12
(001000)	02.20		(001507)	02.15
(001007)	02.22		(001005)	02.10
(001000)	03.01		(001006)	02.20
(001000)	03.03		(001007)	02.22
(001010)	03.07	245	(001000)	03.01
(001017)	03.08	250	(001015)	03.06
(001002)	03.11	251		
(001025)	03.12	253	(001021)	03.10
(001030)	03.15	201		

04/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP	
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO. AND PAGE/BOX
(001633)	03.16	310	(001629)	03.14
(001634)	03.17	316		
(001635)	03.18	330	(001632)	03.15
(001642)	03.21	335	(001633)	03.16
(001647)	03.22	340	(001641)	03.20
(001652)	04.01		(001651)	03.23
(001653)	04.03		(001652)	04.01
(001654)	04.05		(001653)	04.03
(001655)	04.07		(001654)	04.05
(001667)	04.13	360		
(001668)	04.14	400	(001666)	04.12
(001672)	04.16	401		
(001675)	04.17	410	(001671)	04.15
(001676)	04.18	411		
(001677)	04.19	412	(001675)	04.17
(001678)	04.20	414		
(001679)	04.21	415	(001677)	04.19
(001680)	04.22	416		
(001681)	04.23	420	(001679)	04.21
(001682)	04.24	422		
(001683)	04.25	424	(001681)	04.23
(001684)	04.26	426		
(001685)	04.27	430	(001674)	04.16
(001690)	04.29	435	(001679)	04.21
(001693)	04.30	440	(001683)	04.25
(001698)	04.33		(001689)	04.28
(001699)	04.35		(001697)	04.31
(001700)	05.01		(001698)	04.33
(001701)	05.03		(001699)	04.35
(001702)	05.07	445	(001700)	05.01
(001709)	05.08	450		
(001714)	05.11	451	(001707)	05.06
(001715)	05.12	452	(001713)	05.10
(001721)	05.16	452		
(001723)	05.17	454	(001720)	05.15
(001726)	05.19	456		
(001728)	05.20	458	(001725)	05.18
(001744)	05.27	500	(001574)	01.22
(001746)	05.29	600	(001746)	05.29
(001755)	06.01	615	(001753)	05.31
(001756)	06.02	620	(001753)	05.31
(001765)	06.16	630		
(001766)	06.17	640	(001764)	06.15
(001768)	06.19	700	(001746)	05.29
(001768)	06.22		(001814)	06.31
(001768)	06.24	702		
(001800)	06.25	704	(001768)	06.23
(001814)	06.31	710		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJ10C0

(001823)	09.01	GJ10C0	(001393)	56	16-X			
(001895)	09.10	2						
(001896)	09.11	10						
(001897)	09.12	20	(001898)	09.22	(002062)	71.10	(002072)	72.07
(001898)	09.13	40						
(001899)	09.14	50						
(001900)	09.15	55						
(001901)	09.16	70	(001900)	09.13				
(001902)	09.17	100	(001907)	09.12	(001909)	09.14	(001900)	09.15
(001903)	09.18	110						
(001904)	09.19	120	(001912)	09.27	(001913)	09.28		
(001906)	09.22		(001907)	09.20				
(001940)	09.23	300	(001900)	09.15	(001991)	09.16		
(001943)	09.25	303						
(001911)	09.26	300	(001902)	09.17				
(001912)	09.27	310						

04/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				PAGE 10	
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAGE/BOX		
(001013)	00.20	020						
(001000)	70.01	130	(001003)	00.10				
(001004)	70.04		(001003)	70.02				
(001005)	70.05	130						
(001014)	70.07	250	(001011)	00.20				
(001047)	70.00	301	(001013)	00.20	(001014)	70.07		
(001050)	70.10	305						
(001054)	70.11	310	(001042)	00.24	(001045)	00.25	(001040)	70.00
(001056)	70.13	311						
(001057)	70.14	312						
(001058)	70.15	314	(001055)	70.12				
(001060)	70.16	316	(001060)	70.13				
(001061)	70.17	317						
(001064)	70.18	320	(001065)	70.12	(001060)	70.10		
(001067)	70.20	321						
(001068)	70.21	322						
(001082)	70.23	331	(001086)	70.10				
(001073)	70.24	330	(001067)	70.20				
(001075)	70.25	332	(001084)	70.23				
(001017)	71.01	400	(001088)	00.11				
(001024)	71.04	409	(001085)	00.10				
(001025)	71.05	500						
(001026)	71.06	510						
(001027)	71.07	520						
(001028)	71.08	530						
(001034)	71.09	600	(001020)	71.00	(001031)	71.13		
(001029)	71.11	550	(001027)	71.07				
(001030)	71.12	560						
(001031)	71.13	570						
(001005)	71.14	335	(001001)	70.20				
(001008)	71.15	340	(001072)	70.22	(001001)	70.20	(002016)	70.10
			(002003)	74.10			(002021)	70.20
(002075)	71.17	000	(001009)	71.16				
(001002)	72.01	400	(001000)	70.15				
(001006)	72.03	401						
(002005)	72.04	700	(001005)	72.02	(002002)	72.10	(002027)	73.02
(002071)	72.07	710					(002032)	73.05
(001000)	72.08	402	(001000)	72.03			(002044)	74.00
(002002)	72.10	403	(001005)	72.03				
(002003)	72.11	406						
(002005)	72.12	407	(002003)	72.11				
(002007)	72.14	408	(002003)	72.11				
(002008)	72.15	410						
(002017)	72.19	420	(002007)	72.14				
(002024)	73.01	450	(001000)	70.15				
(002000)	73.03	451						
(002031)	73.04	452	(002020)	73.03				
(002032)	73.05	453	(002020)	73.03				
(002033)	73.07	454						
(002036)	74.01	455	(002033)	73.07				
(002037)	74.03	456	(002033)	73.07				
(002038)	74.04	457						
(002039)	74.05	458						
(002040)	74.06	459						
(002045)	74.09	460						
(002046)	74.10	461						
(002049)	74.12	465	(002037)	74.03	(002030)	74.04	(002030)	74.05
							(002040)	74.00
(002050)	74.13	466						
(002050)	74.17	460	(002040)	74.12				
(002005)	74.19	050	(001000)	71.16				
(002002)	74.21	1000	(001004)	70.04	(001010)	70.05	(001014)	70.07
			(001005)	71.00	(001037)	71.10	(001024)	71.04
					(001020)	71.11	(001030)	71.12
							(001025)	71.05
							(001031)	71.13

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CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE 0,0000

(002101) 77.01 0,0000 (041005) 90.10-X

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CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE I1LON6

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(002107)	00.12	100	(002105)	00.11		
(002104)	00.15	101				
(002100)	00.16	110	(002103)	00.14		
(002100)	00.17	111				
(002170)	01.01	115	(002100)	00.16		
(002170)	01.02	200	(002100)	00.11		
(002101)	01.03	202	(002170)	01.02		
(002103)	01.04	203	(002170)	01.02		
(002107)	01.06		(002100)	01.07		
(002100)	01.07	204				
(002100)	01.10	250	(002102)	01.03		
(002100)	01.12	251	(002107)	01.11		
(002201)	02.01	252	(002107)	01.11		
(000000)	02.04		(002211)	02.06		
(000011)	02.06	253				
(000210)	02.08	300	(002200)	01.12		
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(000221)	02.11	302	(002217)	02.00		
(000200)	02.14		(002231)	02.16		
(000231)	02.16	303				
(000230)	02.18	350	(002220)	02.10		
(000230)	02.20	351	(002237)	02.10		
(000243)	02.22		(002246)	02.23		
(000246)	02.23	352				
(000251)	02.25	400	(002237)	02.10		
(000257)	02.27	1000	(002107)	00.15	(002174)	00.10 (002170) 01.01

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CHART TITLE - SUBROUTINE I2LON6

(000000)	00.01	I2LON6	(002403)	00.11-X
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(000310)	00.07		(002370)	00.03		
(000304)	00.12	10				
(000307)	00.13	20	(000303)	00.11		
(000330)	00.15	30	(000300)	00.14		
(000331)	00.16	31				
(000330)	00.01	40	(000300)	00.14		
(000330)	00.02	41				
(000341)	00.04	50	(000320)	00.14	(002330)	00.15 (002344) 00.16 (002330) 00.01
(000343)	00.05	51	(000341)	00.04		
(000344)	00.06	52				
(000302)	00.08	70	(000341)	00.04		
(000303)	00.09	71				
(000300)	00.11	500	(000341)	03.04	(000343)	00.05 (000350) 00.07 (000352) 00.00
(000301)	00.12	502	(000300)	00.11		
(000307)	00.15	501				
(000300)	00.16	510	(000300)	00.14		
(000300)	00.17	511				
(000370)	00.10	520	(000300)	00.10		
(000371)	00.10	521				

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(002375)	00.02	941	
(002376)	00.03	800	(002350) 00.11 (002374) 00.01
(002383)	00.07		(002380) 00.00
(002386)	00.08	100	
(002393)	00.13		(002390) 00.14
(002396)	00.14	110	
(002403)	00.18		(002400) 00.10
(002406)	00.19	120	

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(002474)	03.06	151	(002472) 03.05
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(002466)	04.08	107	(002447) 04.05
(002467)	04.09	122	(002463) 04.06
(002468)	05.01	109	(002447) 04.05
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(002481)	05.03	210	(002470) 05.02
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(002506)	06.01	294	(002502) 05.10
(002509)	06.02	300	(002470) 05.02

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(002560)	00.08	14	
(002562)	00.09	20	(002567) 00.05 (002598) 00.07
(002570)	00.13	21	
(002570)	00.14	22	(002560) 00.12
(002575)	00.16	21	
(002582)	100.02		(002581) 00.10
(002589)	100.05	232	(002585) 100.03
(002594)	100.08	234	(002580) 100.06
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(002079)	111.19	180	(002076)	111.16		
(002083)	111.21	200	(002047)	110.14	(002067)	111.09

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(002063)	117.11	114		
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(002074)	118.04	124		
(002076)	118.05	125	(002073)	118.03
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(002079)	118.07	131	(002075)	118.04
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(002085)	118.11	135	(002080)	117.15
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(003048)	121.22	177	(003046)	121.20								
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(003048)	122.05	192										
(003071)	122.06	193	(003069)	122.05								
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(003093)	124.03	208	(003090)	124.01								
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(003098)	124.07	212										
(003100)	124.08	213	(003098)	124.07								
(003101)	124.09	214										
(003103)	124.10	215	(003100)	124.08								
(003106)	125.01	216	(003098)	124.07								
(003107)	125.02	217										
(003108)	125.03	218	(003106)	125.01								
(003111)	125.04	220	(003098)	124.04	(003097)	124.06	(003102)	124.09	(003104)	124.10	(003100)	125.02
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(003116)	125.08	230	(003111)	125.04	(003113)	125.06						
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(003236)	128.13	382				
(003237)	128.14	383				
(003239)	128.16	384				
(003240)	128.17	385				
(003242)	128.18	386	(003238)	128.16		
(003245)	128.01	388	(003233)	128.11		
(003246)	128.02	391				
(003248)	128.04	392				
(003249)	128.05	393				
(003250)	128.06	394	(003248)	128.04		
(003251)	128.07	395				
(003253)	128.08	396	(003250)	128.06		
(003255)	128.09	400	(003235)	128.13	(003236)	128.15
(003256)	128.10	401	(003252)	128.07	(003249)	128.01
(003257)	128.11	402			(003247)	128.03
(003259)	128.13	403				
(003260)	128.14	404				
(003261)	128.15	405	(003259)	128.13		
(003262)	128.16	406				
(003264)	128.17	407	(003261)	128.15		

04/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				PAGE 17
CARD 10	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)				
(003266)	130.10	410	(003271) 130.17	(003273) 130.18	(003295) 130.08	(003296) 130.10	(003298) 130.12
(003267)	130.10	411	(003263) 130.16				
(003268)	130.21	412					
(003270)	130.22	413					
(003271)	130.23	414	(003271) 130.21				
(003272)	130.24	415					
(003274)	131.01	417	(003271) 130.23				
(003276)	131.02	420	(003268) 130.20	(003273) 130.24			
(003277)	131.03	421					
(003278)	131.05	422					
(003280)	131.06	423					
(003281)	131.07	424	(003278) 131.05				
(003283)	131.08	430	(003266) 130.16	(003278) 131.02	(003278) 131.04		
(003284)	131.09	431					
(003285)	131.11	432					
(003287)	131.12	433					
(003288)	131.13	434	(003266) 131.11				
(003289)	131.14	435					
(003291)	131.15	436	(003288) 131.13				
(003293)	131.16	440	(003283) 131.08	(003295) 131.10	(003298) 131.14		
(003294)	131.17	441					
(003296)	131.19	442					
(003298)	131.20	443	(003296) 131.19				
(003300)	131.22	444					
(003311)	132.01	454	(003300) 132.06				
(003303)	132.02	445	(003296) 131.19				
(003305)	132.03	450	(003293) 131.16	(003295) 131.10	(003298) 131.21	(003301) 131.22	
(003306)	132.04	451					
(003308)	132.06	452					
(003309)	132.07	453					
(003313)	132.08	455	(003300) 132.06				
(003315)	132.09	460	(003312) 132.01	(003305) 132.03	(003307) 132.05	(003310) 132.07	
(003316)	132.10	461					
(003318)	132.12	462					
(003319)	132.13	463					
(003321)	132.14	464	(003318) 132.12				
(003323)	132.15	470	(003315) 132.09	(003317) 132.11	(003320) 132.13		
(003324)	132.16	471					
(003326)	132.18	472					
(003327)	132.19	473					
(003330)	132.21	474					
(003331)	132.22	475	(003329) 132.20				
(003332)	132.23	478	(003326) 132.18				
(003334)	133.01	480	(003323) 132.15	(003325) 132.17			
(003335)	133.02	481					
(003337)	133.04	482					
(003338)	133.05	483					
(003339)	133.06	485	(003337) 133.04				
(003341)	133.07	490	(003334) 133.01	(003336) 133.03			
(003342)	133.08	491					
(003344)	133.10	492					
(003345)	133.11	493					
(003347)	133.12	500	(003341) 133.07	(003343) 133.09	(003344) 133.10		
(003348)	133.13	501					
(003350)	133.15	502					
(003351)	133.16	503					
(003353)	133.17	510	(003347) 133.12	(003349) 133.14	(003350) 133.15		
(003354)	133.18	511					
(003356)	133.20	512					
(003357)	133.21	513					
(003358)	133.22	515	(003356) 133.20				
(003361)	133.23	520	(003353) 133.17	(003359) 133.19	(003358) 133.21		
(003362)	133.24	521					
(003364)	133.26	522					
(003365)	133.27	523					
(003367)	133.28	530	(003361) 133.23	(003363) 133.25	(003364) 133.26		
(003368)	133.29	531					
(003370)	134.01	532					
(003371)	134.02	533					
(003372)	134.03	534					
(003373)	134.04	535	(003371) 134.02				

TABLE OF CONTENTS AND REFERENCES			AUTOFLOW CHART SET - SHEEP			PAGE 10
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)			
(003375)	134.05	040	(003380)	133.30	(003370)	134.01
(003376)	134.06	041				
(003378)	134.08	042				
(003379)	134.09	043				
(003381)	134.11	050	(003367)	133.20	(003375)	134.05
(003382)	134.12	051			(003377)	134.07
(003384)	134.14	052			(003378)	134.08
(003385)	134.15	050	(003381)	134.11	(003383)	134.13
(003387)	134.16	051				
(003389)	134.18	052				
(003389)	134.19	070	(003388)	134.15	(003388)	134.17
(003393)	134.20	070				
(003394)	134.21	071				
(003395)	134.23	072				
(003398)	134.25	073				
(003400)	134.26	074	(003388)	134.24		
(003402)	134.27	075	(003400)	134.26	(003400)	134.28
(003405)	134.28	076	(003400)	134.26	(003400)	134.28
(003408)	134.29	077	(003400)	134.26	(003400)	134.28
(003409)	134.30	1000	(003382)	134.10	(003383)	134.20
					(003395)	134.22
					(003403)	134.27
					(003406)	134.28

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SPRINT

(003410)	137.01	SPRINT	(001424)	57.13-X
(003505)	137.02	0001		
(003507)	137.10	135		
(003511)	137.20	137	(003506)	137.17
(003513)	138.10		(003510)	138.02
(003516)	138.22	174		
(003520)	138.25		(003522)	138.28
(003522)	138.28	170		
(003763)	139.24	0002	(003504)	137.01
(003770)	139.30		(003772)	139.30
(003772)	139.30	205		
(003774)	139.32		(003776)	139.35
(003775)	139.33	300		
(003778)	139.35	310	(003774)	139.32
(003810)	140.10	502		
(003800)	140.21	504	(003817)	140.10
(003800)	140.28	507		
(003800)	140.28	510	(003825)	140.25
(003834)	140.33	514		
(003835)	140.35	516	(003833)	140.32
(003837)	140.35	518		
(003839)	140.38	520	(003838)	140.35
(003840)	140.38	522		
(003842)	140.41	524	(003839)	140.38
(003845)	140.44	526		
(003847)	140.46	528	(003844)	140.43
(003851)	141.01	604		
(003853)	141.03	606	(003850)	140.53
(003854)	141.04	608		
(003855)	141.05	610	(003853)	141.03
(003857)	141.07	612		
(003858)	141.08	614	(003855)	141.05
(003870)	141.10	616		
(003872)	141.12	618	(003859)	141.08
(003873)	141.13	620		
(003875)	141.15	622	(003876)	141.12
(003876)	141.16	624		
(003877)	141.18	626	(003875)	141.15
(003878)	141.19	628		
(003880)	141.21	630	(003877)	141.18
(003880)	141.31	630		
(003882)	141.34	640	(003880)	141.30
(003883)	141.35	642		
(003885)	141.38	644	(003882)	141.34

CARD ID PAGE/BOX NAME

REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)

(003902)	141.44	648	
(003904)	141.46	650	(003901) 141.43
(003905)	141.47	652	
(003907)	141.49	654	(003904) 141.46
(003908)	142.01	660	
(003910)	142.03	655	(003907) 141.49
(003911)	142.04	656	
(003913)	142.06	658	(003910) 142.03
(003916)	142.08	662	
(003918)	142.10	664	(003915) 142.07
(003919)	142.11	666	
(003921)	142.13	668	(003918) 142.10
(003922)	142.14	670	
(003924)	142.16	672	(003921) 142.13
(003925)	142.17	674	
(003927)	142.19	676	(003924) 142.16
(003930)	142.22	678	
(003932)	142.24	680	(003929) 142.21

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SUPPLY

(003998)	151.01	SUPPLY	(001422) 57.11-X
(004041)	151.02		(004042) 151.03
(004042)	151.03	20	
(004045)	151.06		(004069) 151.14
(004069)	151.14	100	
(004073)	151.17		(004075) 151.18
(004075)	151.18	110	
(004078)	151.21		(004080) 151.22
(004080)	151.22	120	
(004087)	151.26	122	
(004088)	151.27	124	(004085) 151.25
(004091)	151.30	131	
(004092)	151.31	132	(004090) 151.28
(004100)	151.35	134	
(004101)	151.36	135	(004098) 151.34
(004103)	151.38	138	
(004104)	151.39	139	(004102) 151.37
(004105)	151.41		(004100) 151.42
(004109)	151.42	150	
(004112)	152.03		(004114) 152.04
(004114)	152.04	200	
(004116)	152.06		(004118) 152.07
(004118)	152.07	300	
(004120)	152.12	401	(004126) 152.11
(004124)	152.14	410	(004128) 152.11
(004142)	152.16	420	(004132) 152.13

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTDIST

(004152)	156.01	MTDIST	(001421) 57.10-X
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CHART TITLE - NON-PROCEDURAL STATEMENTS

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## TABLE OF DIAGNOSTICS

AUTOFLOW CHART SET - SLEEP

PAGE 1

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
(000010)	2.02	UNRECOGNIZED SYNTAX
(000035)	2.08	UNRECOGNIZED SYNTAX
(002310)	00.00	UNDEFINED - 'READY5' EXTERNAL REFERENCE
(002319)	00.09	UNDEFINED - 'READY5' EXTERNAL REFERENCE
(002301)	00.05	UNDEFINED - 'READY5' EXTERNAL REFERENCE
(002301)	00.10	UNDEFINED - 'READY5' EXTERNAL REFERENCE
(002401)	00.10	UNDEFINED - 'READY5' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS  
OF  
SECOND FUSELAGE OVERLAY



09/10/79

AUTOFLOW CHART SET - SHEEP SECOND FUELAGE OVERLAY

PAGE 01

CHART TITLE - INTRODUCTORY COMMENTS

.....  
PROGRAM FUELAGE  
.....

## CHART TITLE - PROCEDURES

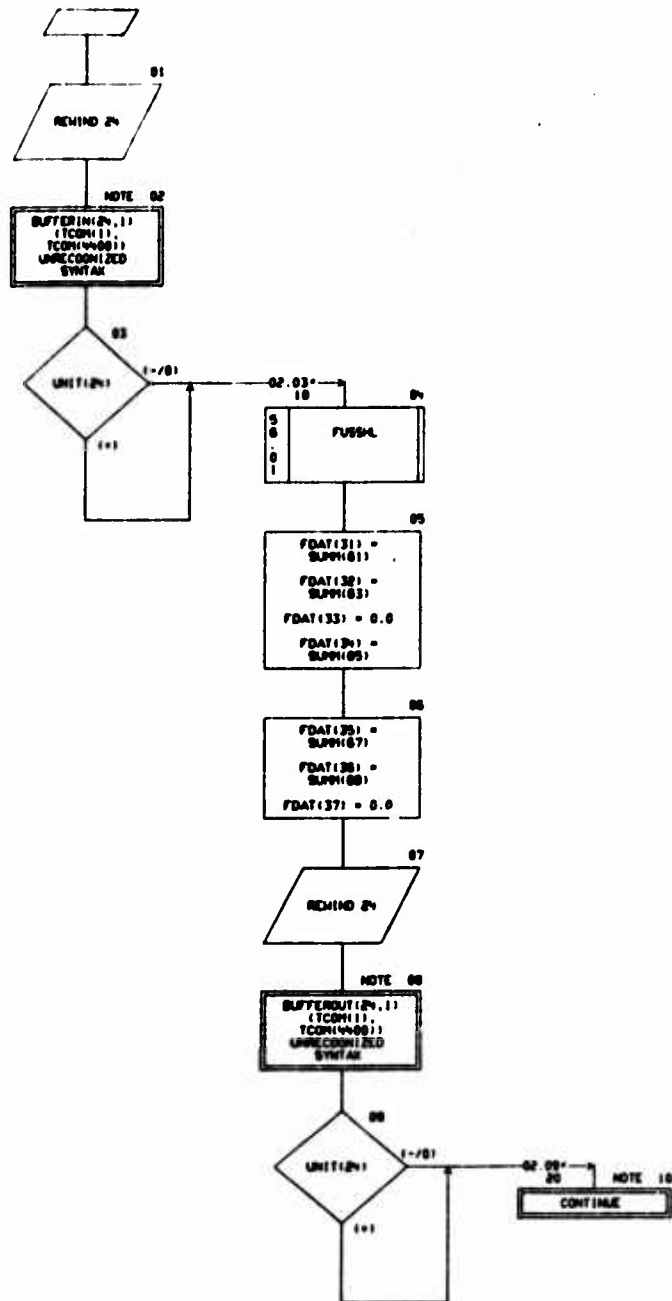


CHART TITLE - NON-PROCEDURAL STATEMENTS

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PROGRAM FUSE2  
COMMON TCON(400)  
COMMON /FBATT/ FBAT(60)  
DIMENSION SUPP(100)  
EQUIVALENCE (SUPP(1),TCON(400))
```

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE BLANKS  
.....

CHART TITLE - SUBROUTINE BLADES

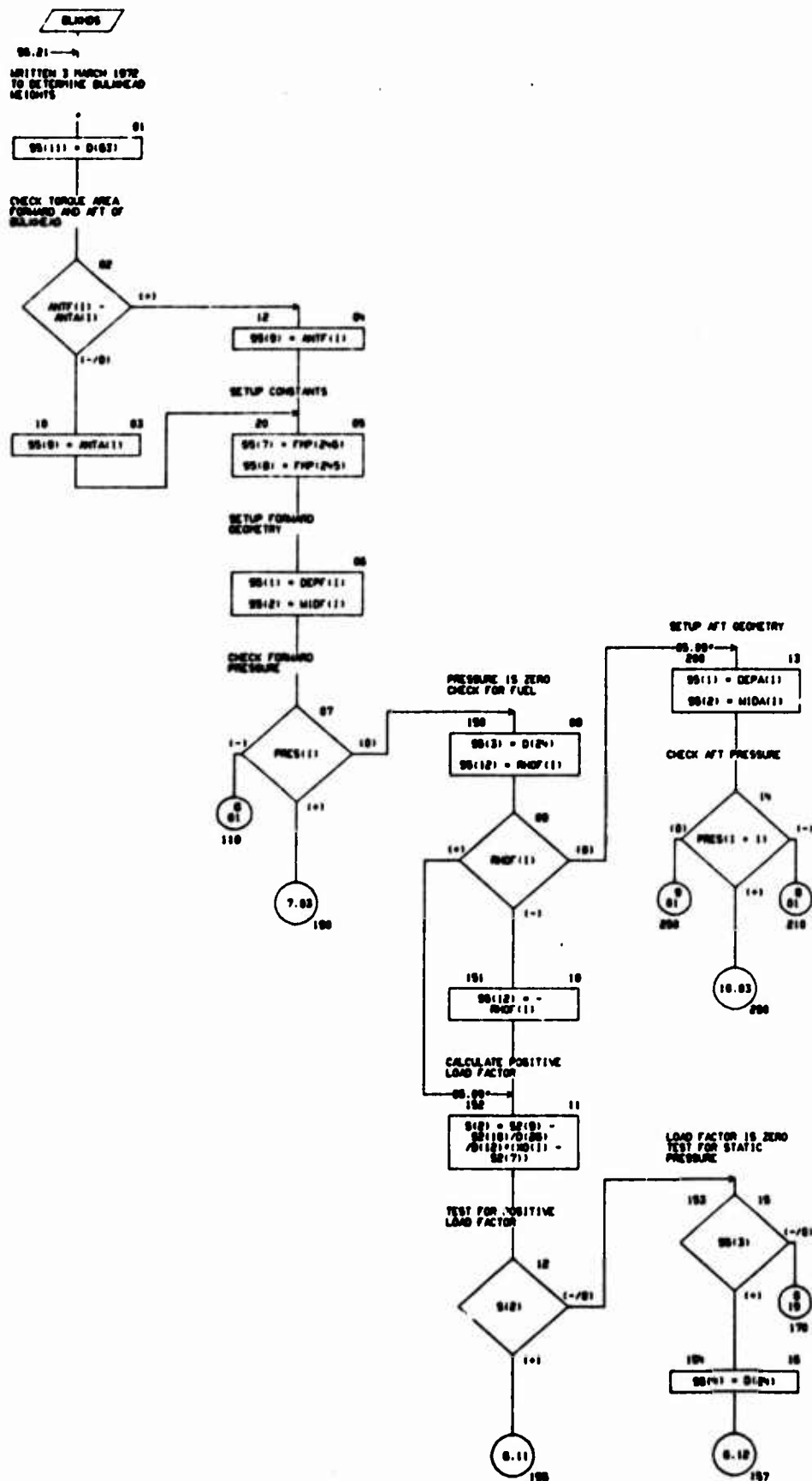


CHART TITLE - SUBROUTINE BLANDS

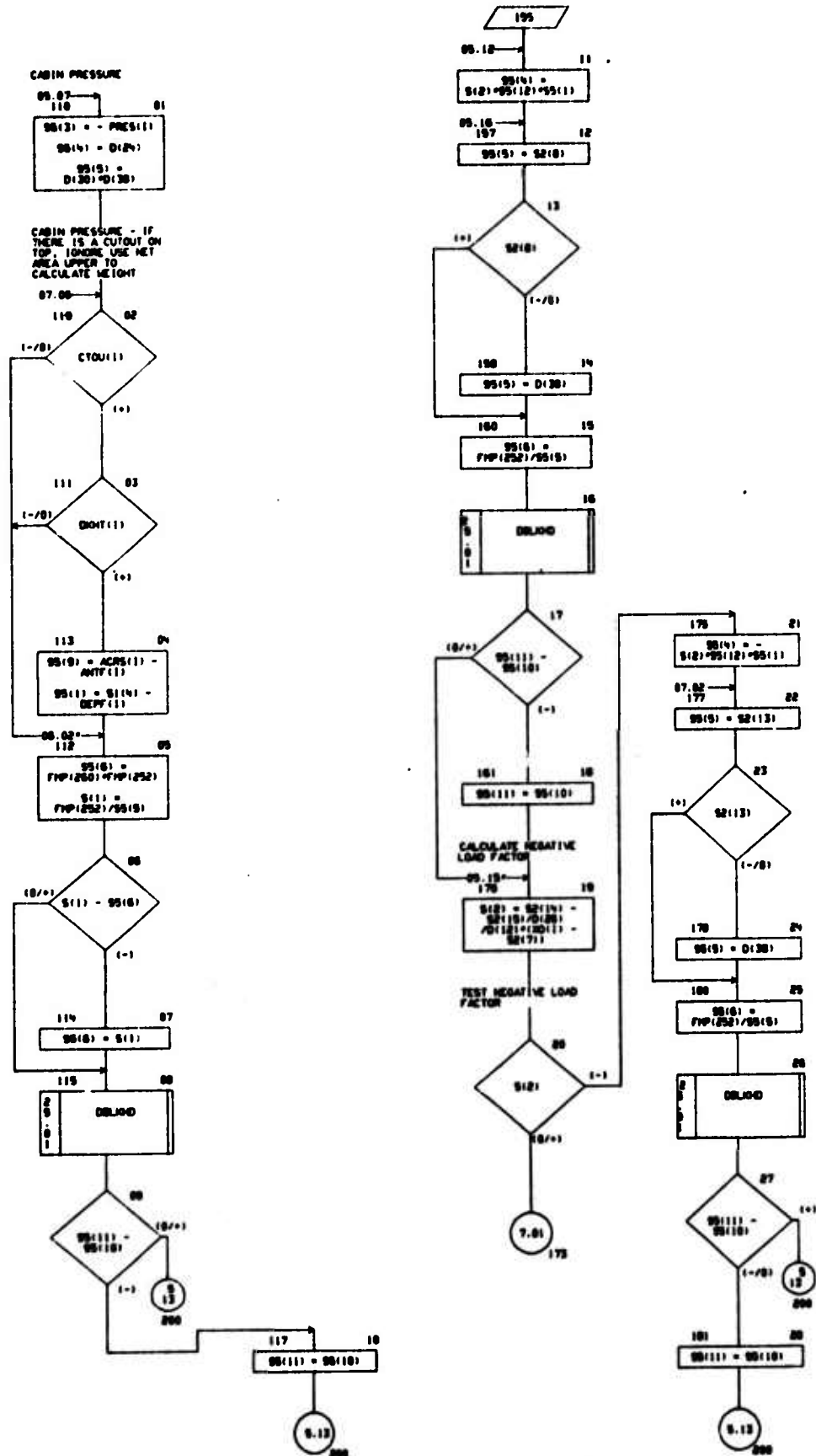


CHART TITLE - SUBROUTINE BLK005

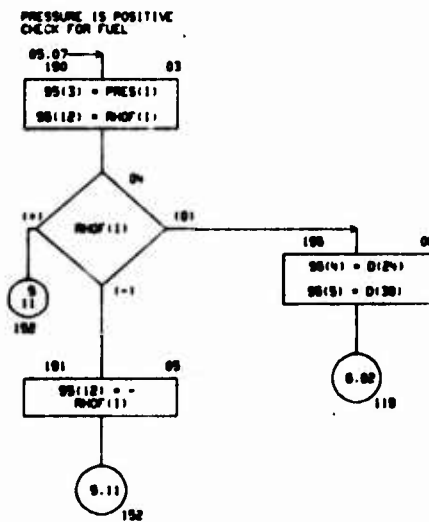
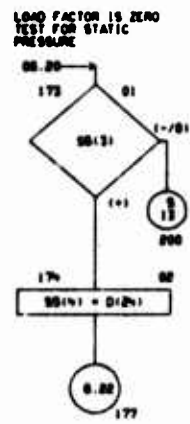
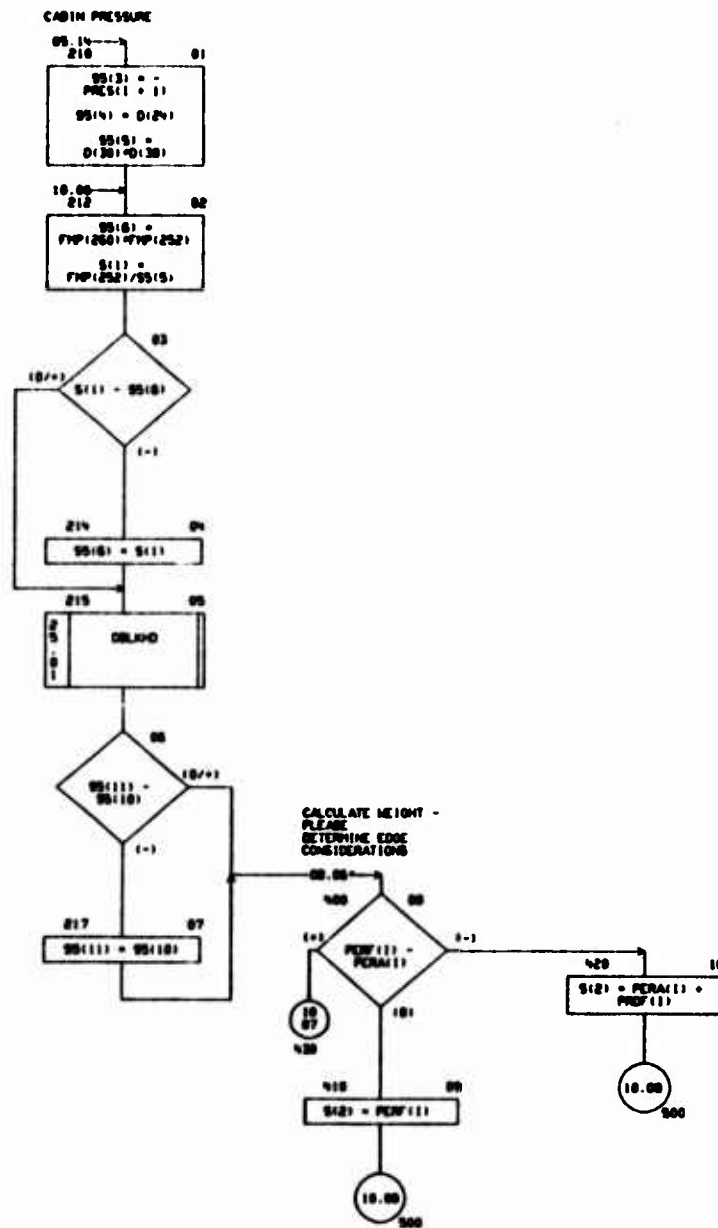


CHART TITLE - SUBROUTINE BLK405









## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
DIMENSION CIND(50)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION NO(20)
DIMENSION DONT(20),CTOU(20)
DIMENSION PRES(20),RNOF(20)
DIMENSION S(100),S1(20),S2(20),S3(20)
DIMENSION FPP(300)
DIMENSION ACRS(20),ANTF(20),ANTA(20),PERF(20),PERA(20),PROF(20),
PRDA(20)
DIMENSION DEPF(20),DEPA(20),MIDF(20),MIDA(20)
DIMENSION MTBK(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(400)),
(ND(1),TCOM(401))
EQUIVALENCE (D(24),CIND(1))
EQUIVALENCE (D(36),NO(1))
EQUIVALENCE (D(44),DONT(1)),(D(46),CTOU(1))
EQUIVALENCE (D(60),PRES(1)),(D(62),RNOF(1))
EQUIVALENCE (T(1),S(1)),(T(10),S(1)),(T(12),S2(1)),
(T(10),S3(1))
EQUIVALENCE (T(120),FPP(1))
EQUIVALENCE (D(110),ACRS(1)),(D(120),ANTF(1)),
(D(114),ANTA(1)),(D(116),PERF(1)),(D(118),PERA(1)),
(D(120),PROF(1)),(D(122),PRDA(1))
EQUIVALENCE (D(124),DEPF(1)),(D(126),DEPA(1)),
(D(128),MIDF(1)),(D(130),MIDA(1))
EQUIVALENCE (T(103),MTBK(1))
EQUIVALENCE (ND(10),1)

```

04/10/76

AUTOFLOW CHART SET - SHEET

SECOND FUSELAGE OVERLAY

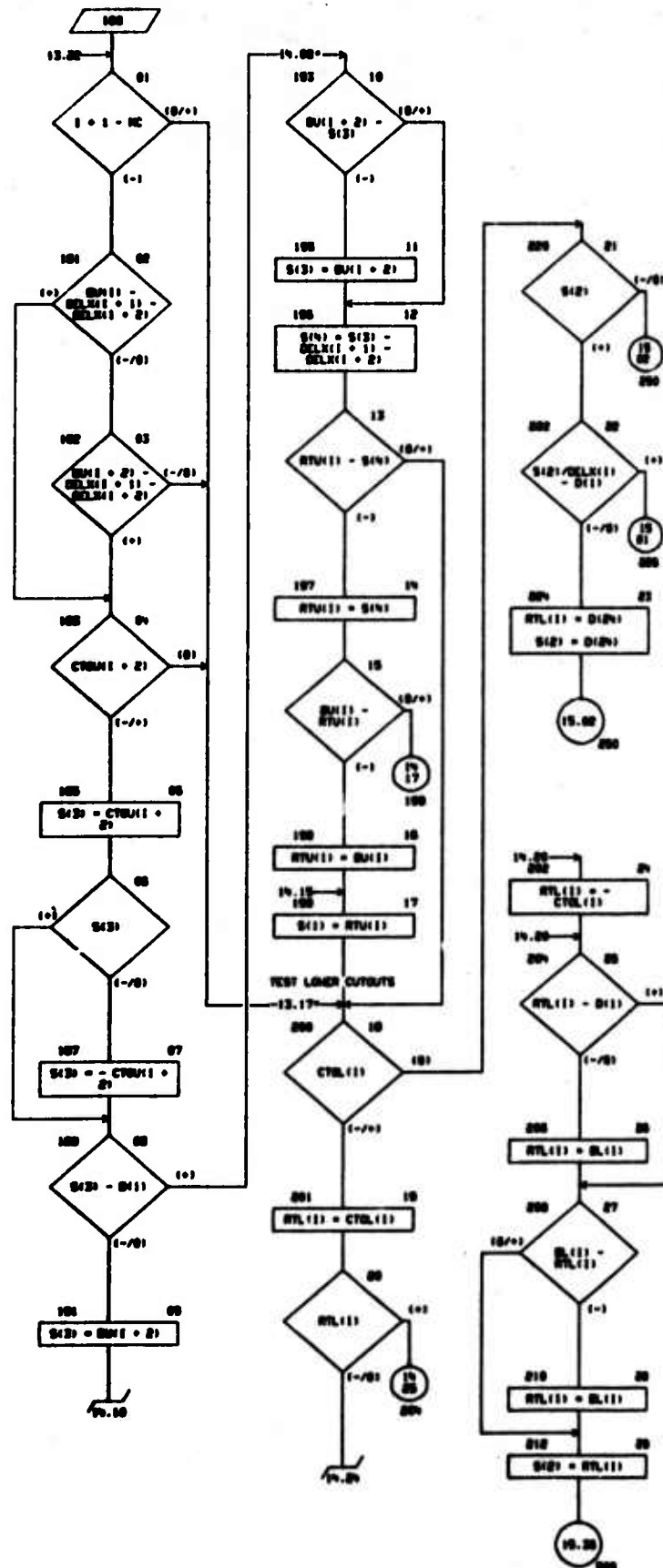
PAGE 12

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE CUTOFF  
.....

175  
5(1) = 275(1)  
14.10

CHART TITLE - SUBROUTINE OUTPUT





## CHART TITLE - NON-PROCEDURAL STATEMENTS

```
DIMENSION S(100)
COMMON TCON(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION BU(20),BL(20)
DIMENSION CTOL(20),CTOL(20),DELX(20)
DIMENSION RTU(20),RTL(20)
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(401)),
(ND(1),TCON(420))
EQUIVALENCE (D(151),RTU(1)),(D(153),RTL(1))
EQUIVALENCE (T(1),S(1))
EQUIVALENCE (T(30),BU(1)),(T(32),BL(1)),(T(30),DELX(1))
EQUIVALENCE (D(40),CTOL(1)),(D(40),CTOL(1))
EQUIVALENCE (ND(10),1), (ND(11),NC)
```



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AUTOFLON CHART SET - SHEEP SECOND FUELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE CUPRES  
.....

CHART TITLE - SUBROUTINE CUPRES

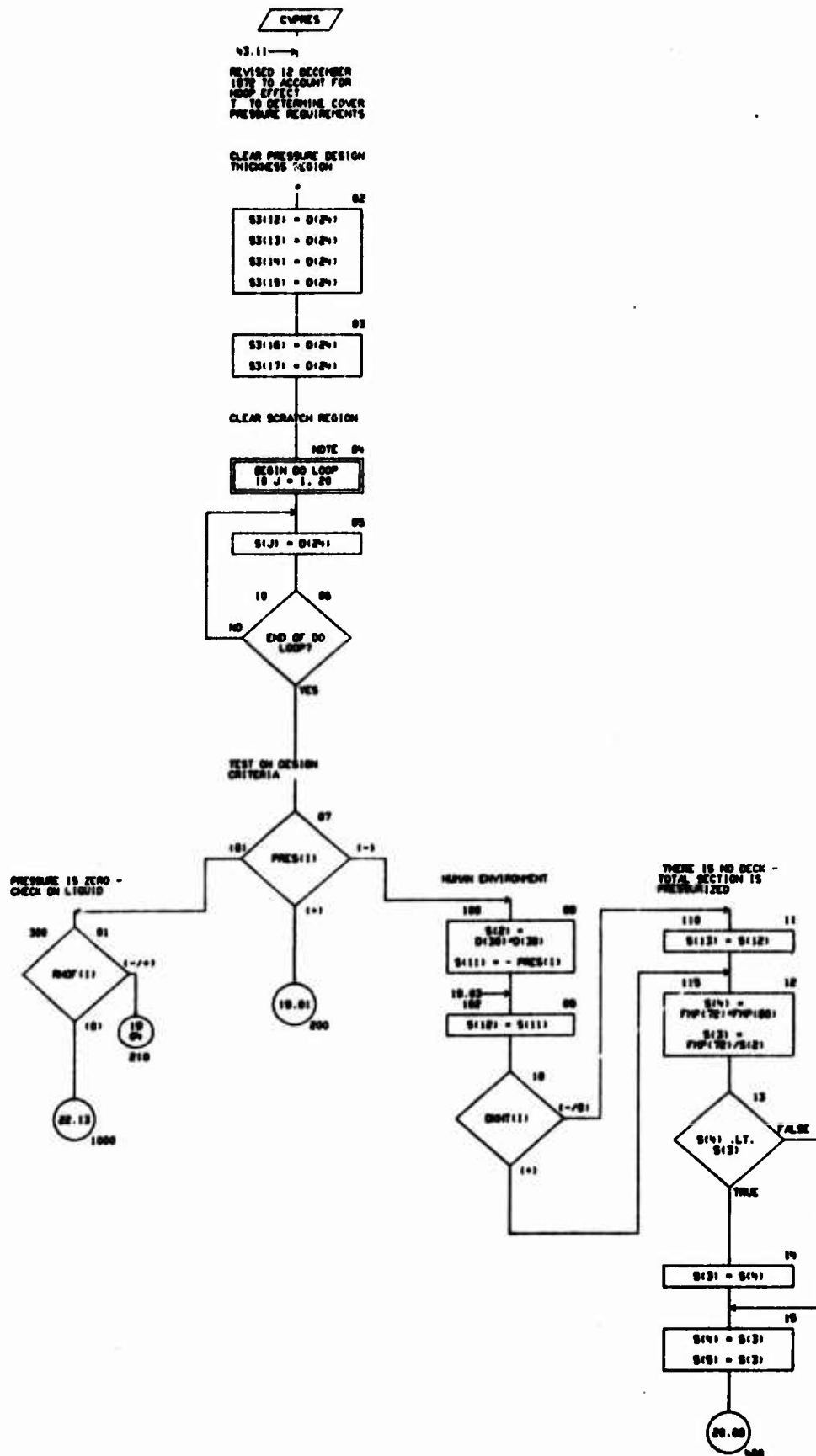


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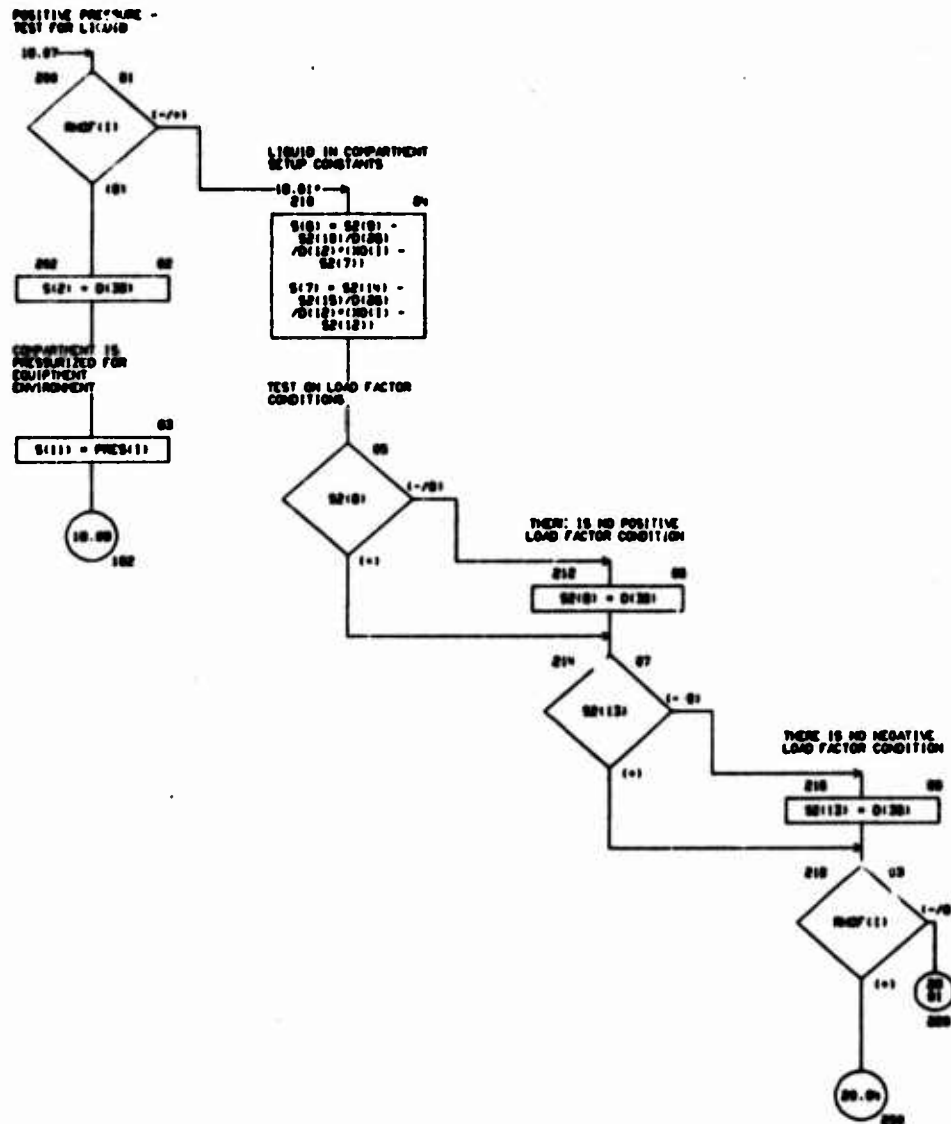


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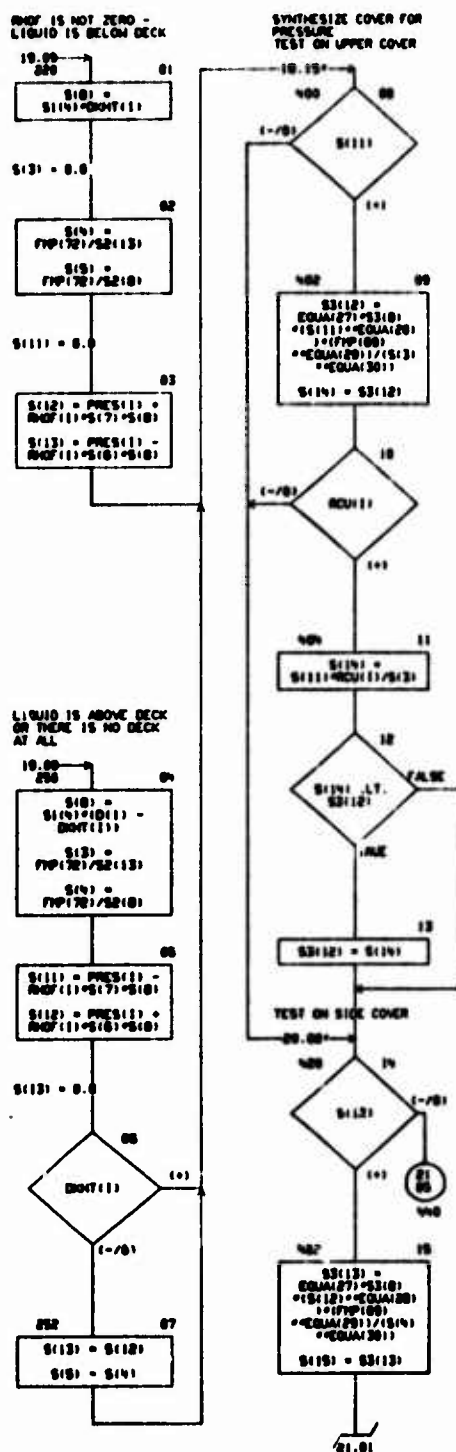


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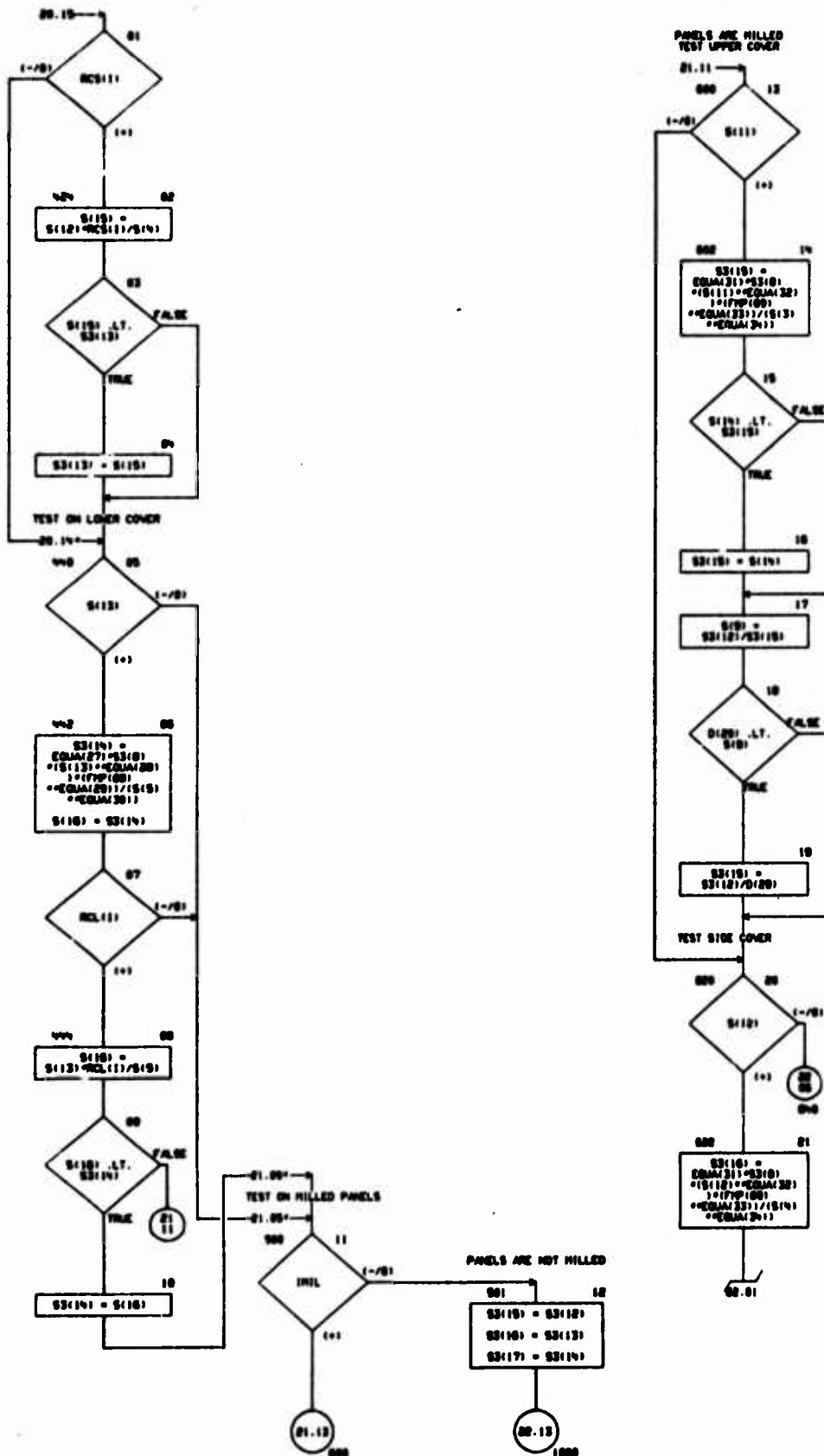
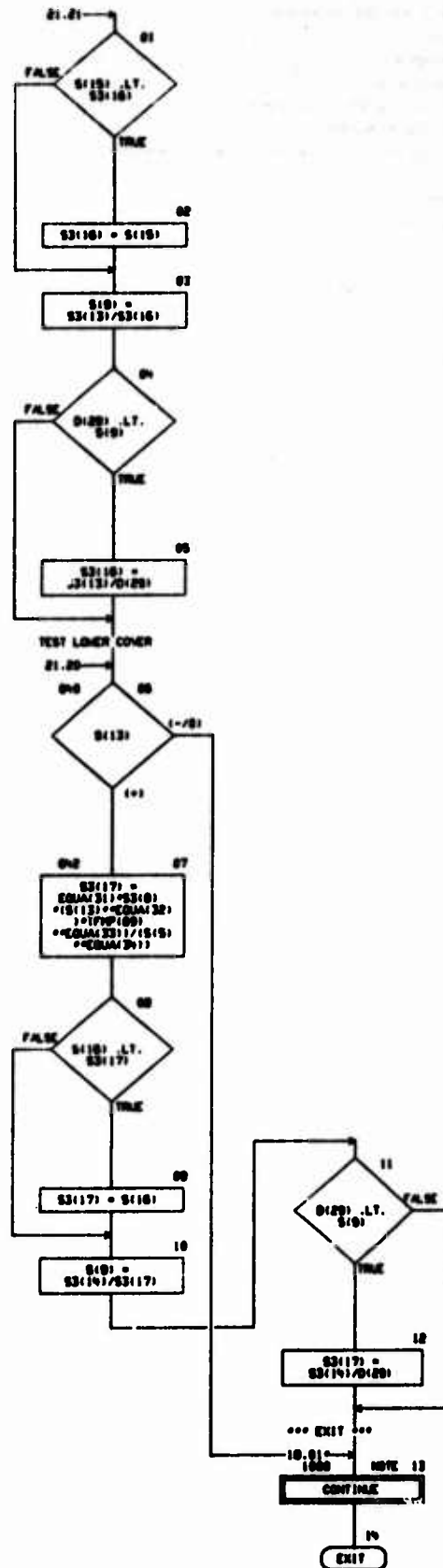


CHART TITLE - SUBROUTINE CUPRES



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON TCON(400)
DIMENSION S(200),T(200),DC(100),ND(200)
DIMENSION EQU(100)
DIMENSION NO(20),BMT(20)
DIMENSION PRES(20),RND(20)
DIMENSION S(100),S(120),S2(20),S3(20),PMP(300)
DIMENSION RCU(20),RCL(20),RCS(20)
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(401)),
  (ND(1),TCON(401))
EQUIVALENCE (D(01),EQU(1))
EQUIVALENCE (D(20),ND(1))
EQUIVALENCE (D(40),BMT(1))
EQUIVALENCE (D(60),PRES(1)),(D(80),RND(1))
EQUIVALENCE (T(1),S(1)),(T(10),S(1)),(T(120),S2(1)),
  (T(140),S3(1)),(T(120),PMP(1))
EQUIVALENCE (T(20),RCU(1)),(T(80),RCL(1)),(T(80),RCS(1))
EQUIVALENCE (ND(10),J), (ND(10),J), (ND(120),PML)
```

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AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

\*\*\*\*\*  
SUBROUTINE DELMOD  
\*\*\*\*\*



04/10/74

AUTOFLIGHT CHART SET - SHEEP SECOND FUELAGE OVERLAY

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CHART TITLE - SUBROUTINE DELAND

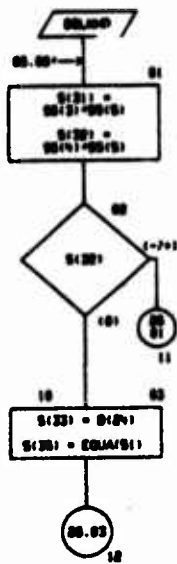


CHART TITLE - SUBROUTINE DOLAND

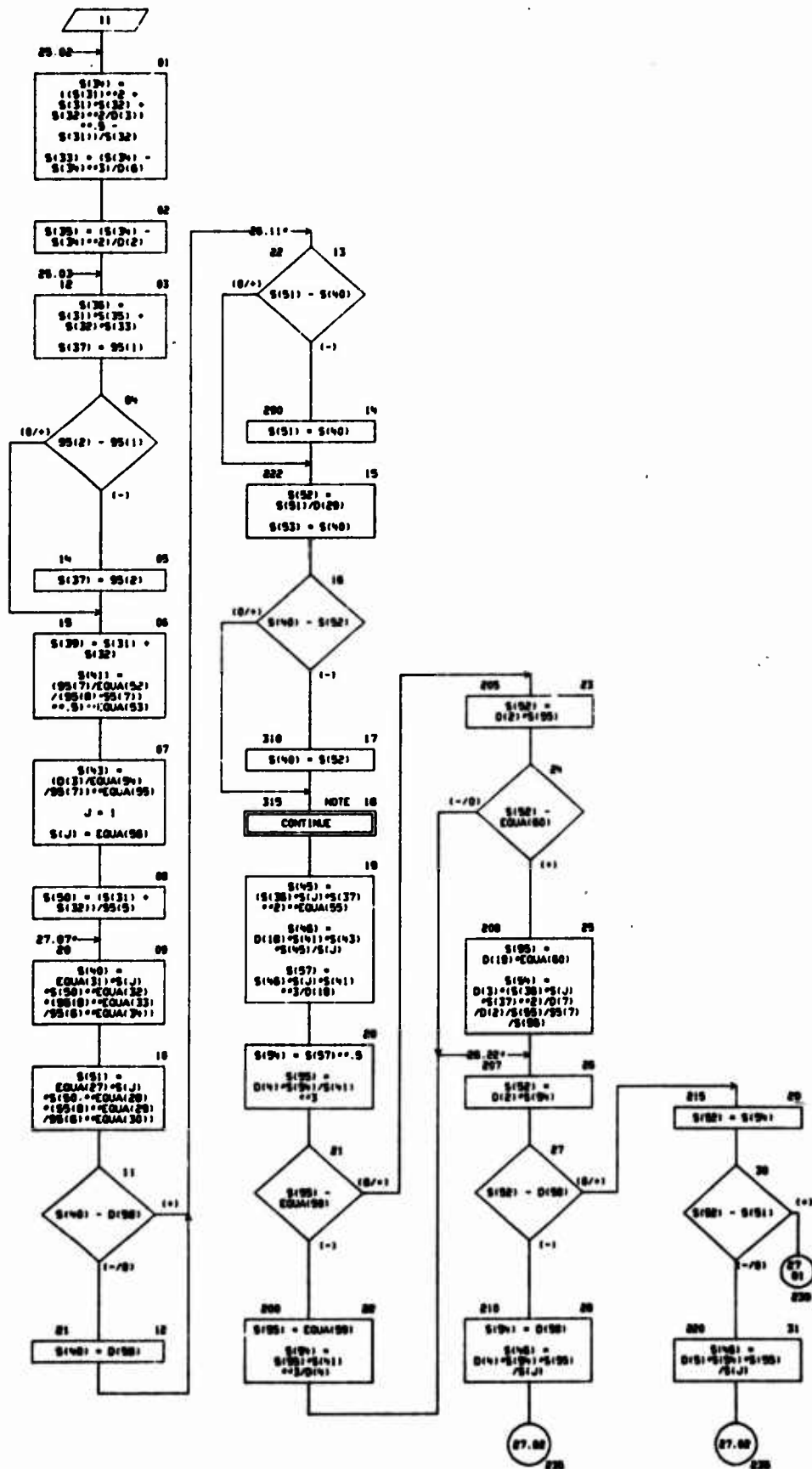


CHART TITLE - SUBROUTINE DELAND

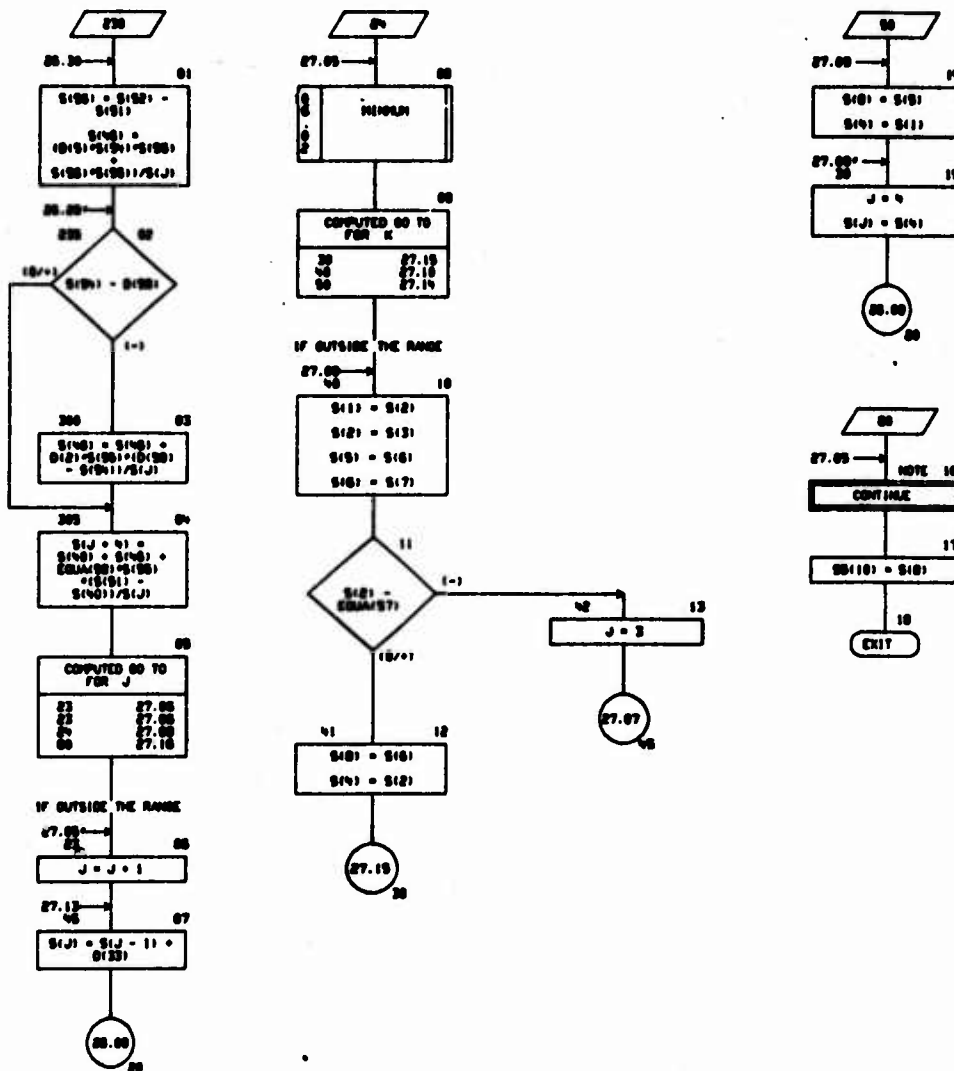


CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION EQUA(100)
DIMENSION S(100),SS(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(2001)),(DC(1),TCOM(4101)),
(ND(1),TCOM(4201))
EQUIVALENCE (D(10),EQUA(1))
EQUIVALENCE (T(1),S(1)),(T(10),SS(1))
EQUIVALENCE (ND(102),J),(ND(103),K)
```

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE FEEDS  
.....

CHART TITLE - SUBROUTINE PRND

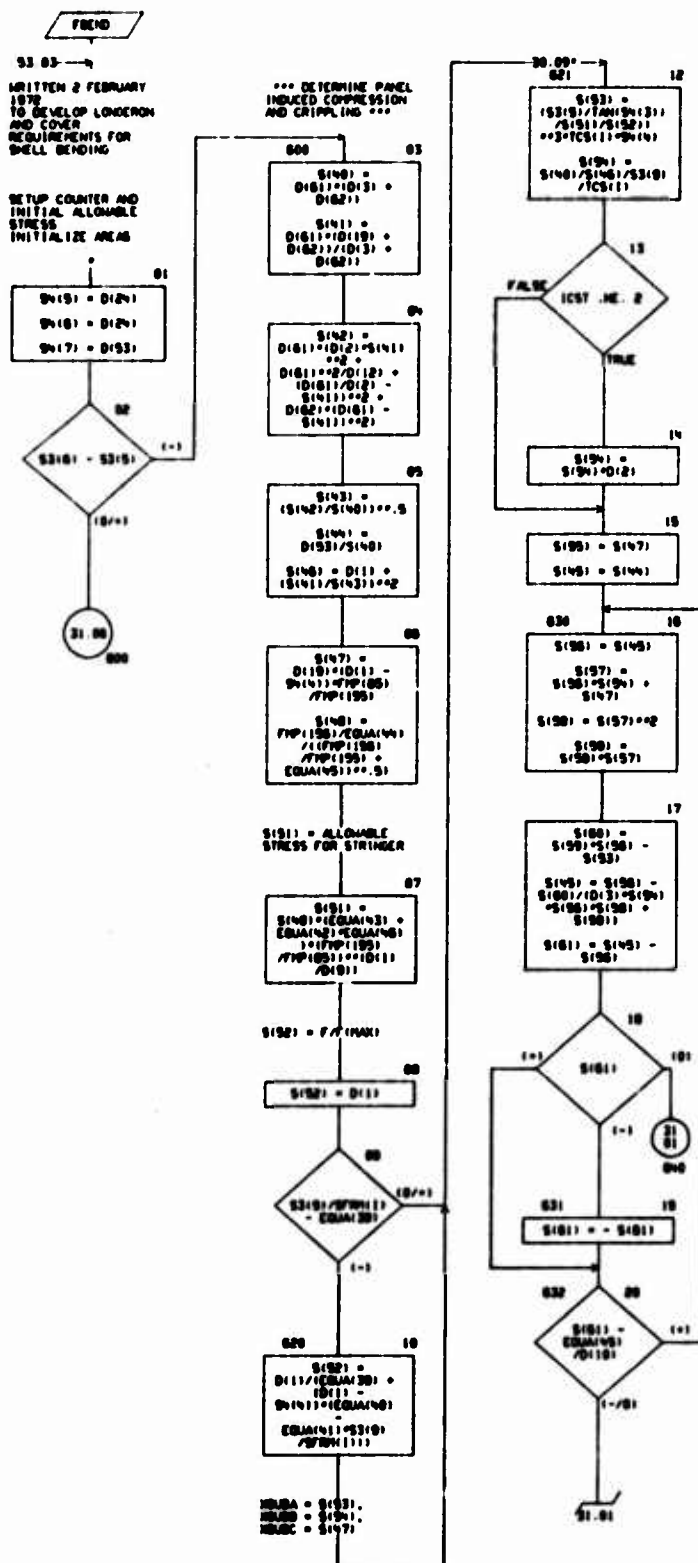




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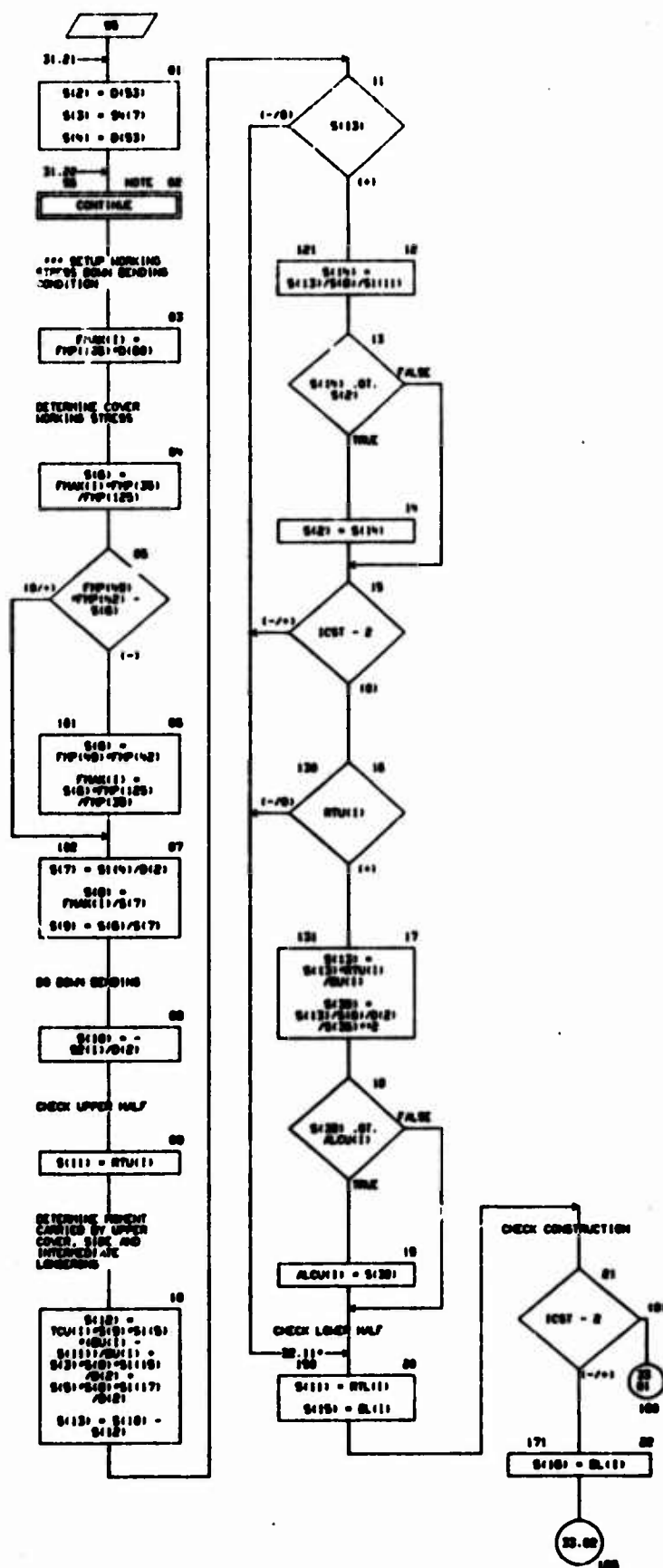
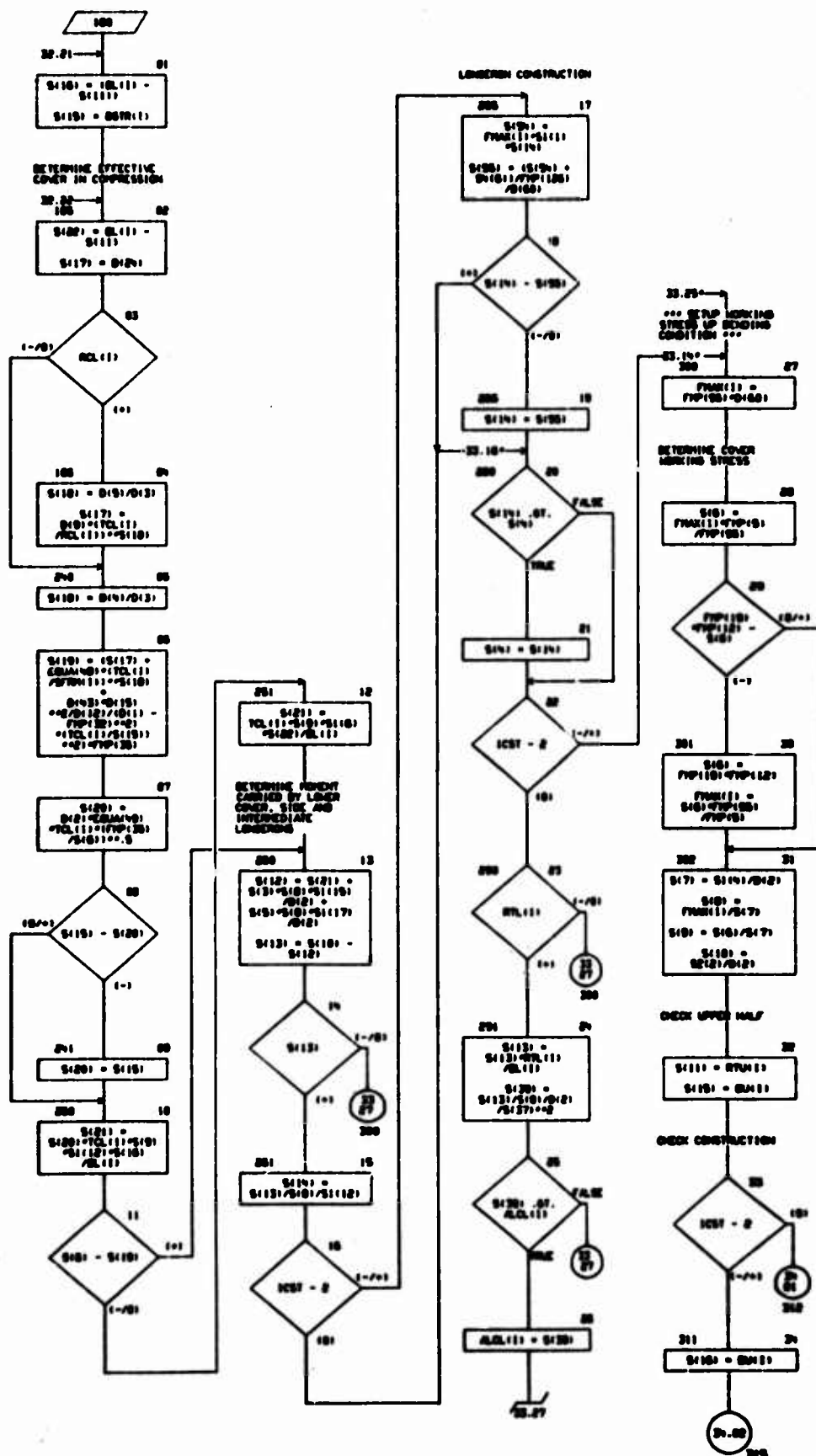




CHART TITLE - SUBROUTINE PRND



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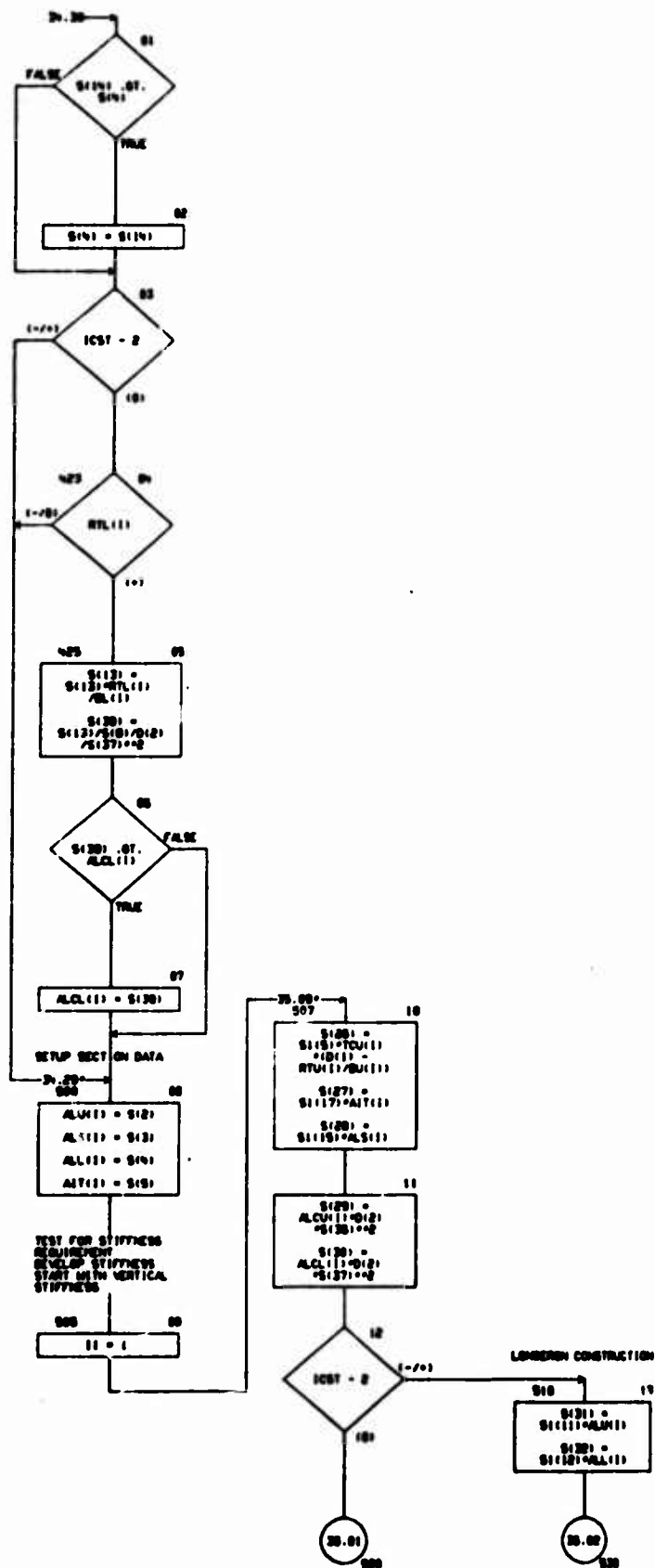
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    12["S(12) = TOL(1)*S(10)+S(15)  
S(12)/S(11)"] --> 13
    13["Determine Moment Carried by Upper Cover, Side and Intermediate Loadings"] --> 14
    14["S(12) = S(21) + S(3)*S(10)+S(15)  
/S(2) + S(5)*S(10)+S(17)  
/S(2)"] --> 15
    15["S(13) = S(10) - S(12)"] --> 16
    16{"S(13)"} --> 17
    17{"1-0"} --> 18
    18["S(14) = S(13)/S(10)+S(11)"] --> 19
    19{"1-0"} --> 20
    20{"1-0"} --> 21
    21(( )) --> 22
    22["S(12) = TOL(1)*S(10)+S(15)  
S(12)/S(11)"] --> 23
    23["Determine Moment Carried by Lower Cover, Side and Intermediate Loadings"] --> 24
    24["S(12) = TOL(1)*S(10)+S(15)  
S(12)/S(11) + S(11)*S(10)+S(15)  
/S(2) + S(5)*S(10)+S(17)  
/S(2)"] --> 25
    25["S(13) = S(10) - S(12)"] --> 26
    26{"S(13)"} --> 27
    27{"1-0"} --> 28
    28["S(14) = S(13)/S(10)+S(11)"] --> 29
    29 --> End(( ))
  
```

Flowchart of the second embodiment of the invention, showing a sequence of operations for determining moment carried by upper and lower covers, side and intermediate loadings, and calculating various variables  $S(1)$  through  $S(14)$ .

Operations include:

- 12:  $S(12) = TOL(1) * S(10) + S(15) / S(11)$
- 13: DETERMINE MOMENT CARRIED BY UPPER COVER, SIDE AND INTERMEDIATE LOADINGS
- 14:  $S(12) = S(21) + S(3) * S(10) + S(15) / S(2) + S(5) * S(10) + S(17) / S(2)$
- 15:  $S(13) = S(10) - S(12)$
- 16: Decision:  $S(13)$  (1-0) or 0
- 17:  $S(14) = S(13) / S(10) + S(11)$
- 18: Decision: 1-0 or 0
- 19: Decision: 1-0 or 0
- 20: Decision: 1-0 or 0
- 21: End of sequence 1
- 22:  $S(12) = TOL(1) * S(10) + S(15) / S(11)$
- 23: DETERMINE MOMENT CARRIED BY LOWER COVER, SIDE AND INTERMEDIATE LOADINGS
- 24:  $S(12) = TOL(1) * S(10) + S(15) / S(11) + S(11) * S(10) + S(15) / S(2) + S(5) * S(10) + S(17) / S(2)$
- 25:  $S(13) = S(10) - S(12)$
- 26: Decision:  $S(13)$  (1-0) or 0
- 27: Decision: 1-0 or 0
- 28:  $S(14) = S(13) / S(10) + S(11)$
- 29: End of sequence 2

CHART TITLE - SUBROUTINE FOR 2



### STRINGER CONSTRUCTION

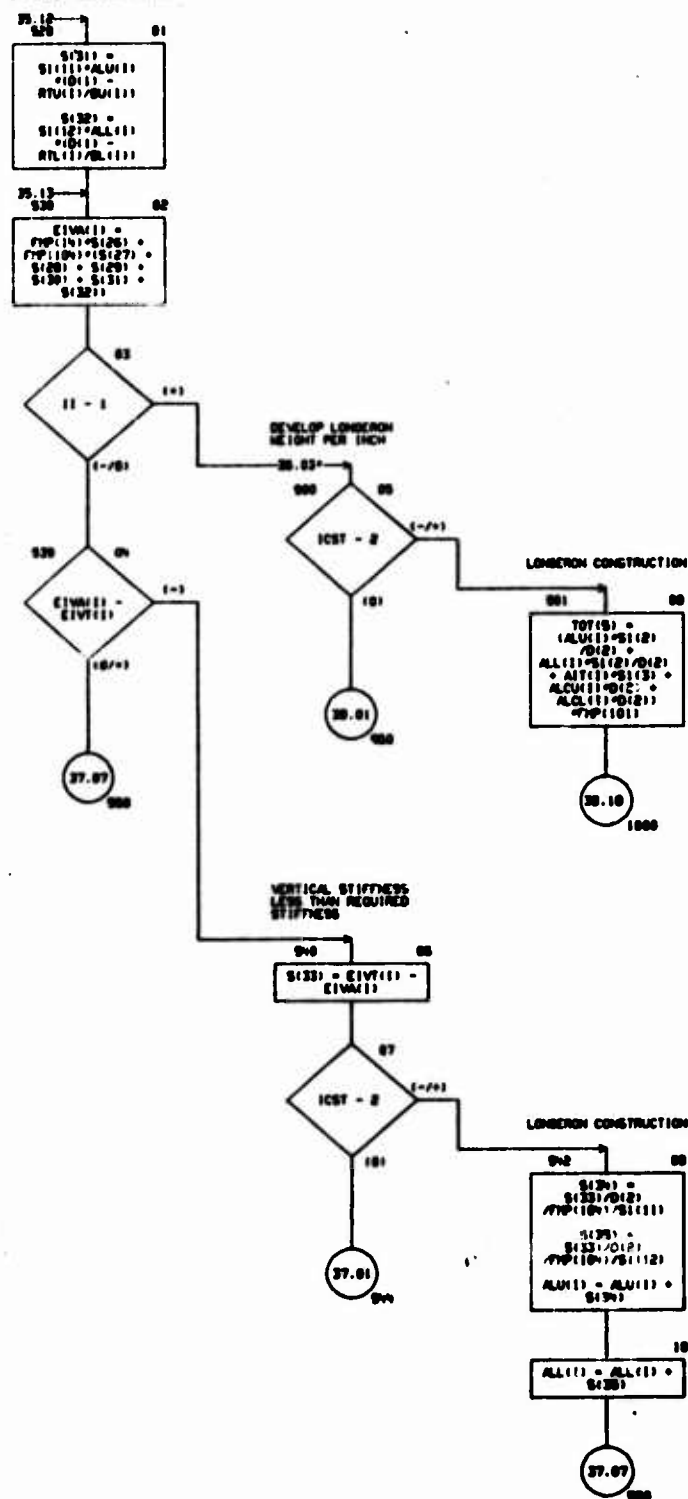


CHART TITLE - SUBROUTINE FEND

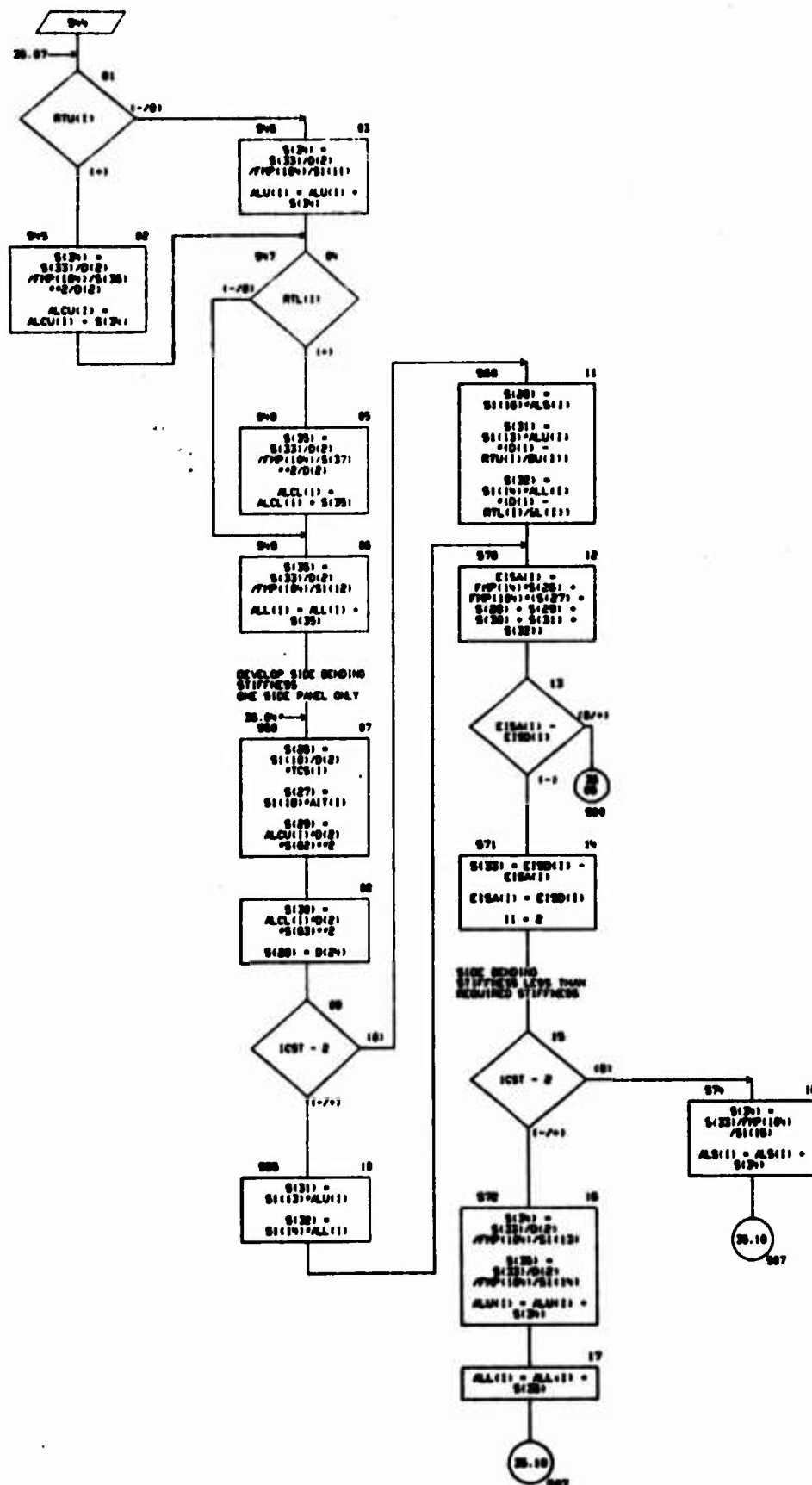
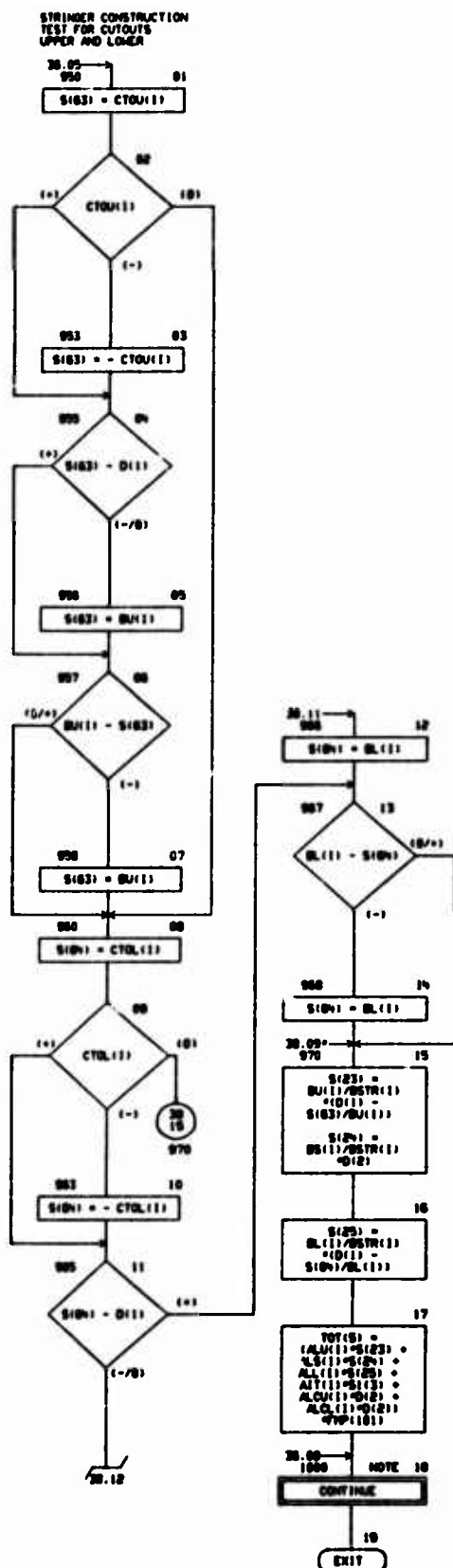


CHART TITLE - SUBROUTINE FBEND



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION EQUA(100)
DIMENSION CTOL(20),CTOL(20)
DIMENSION ALCU(20),ALCL(20)
DIMENSION RTU(20),RTL(20)
DIMENSION EIVT(20),EISD(20)
DIMENSION EIVM(20),EISA(20)
DIMENSION S(100),S(120),S(20),S(30),S(40)
DIMENSION RCU(20),RCL(20),BU(20),BL(20),BS(20)
DIMENSION DOO(20),ND(20),RD(20)
DIMENSION TCU(20),TCS(20),TCL(20),ALU(20),ALL(20),ALS(20),AIT(20)
DIMENSION SFRH(20),BSTR(20),PYAK(20),PYP(100)
DIMENSION TOT(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(2001)),(DC(1),TCOM(401)),
  (ND(1),TCOM(401))
EQUIVALENCE (D(81),EQUA(1))
EQUIVALENCE (D(140),CTOL(1)),(D(140),CTOL(1))
EQUIVALENCE (D(100),EIVT(1)),(D(100),EISD(1))
EQUIVALENCE (D(101),RTU(1)),(D(101),RTL(1))
EQUIVALENCE (D(100),EIVM(1)),(D(101),EISA(1))
EQUIVALENCE (D(100),ALCU(1)),(D(101),ALCL(1))
EQUIVALENCE (ND(107),1)
EQUIVALENCE (T(1),S(1)),(T(101),S(1)),(T(102),S(1)),
  (T(101),S(1)),(T(101),S(1))
EQUIVALENCE (T(101),RCU(1)),(T(101),RCL(1)),
  (T(101),BU(1)),(T(101),BL(1)),(T(101),BS(1))
EQUIVALENCE (T(101),DOO(1)),(T(101),ND(1)),(T(101),RD(1))
EQUIVALENCE (T(101),TCU(1)),(T(101),TCS(1)),(T(101),TCL(1)),
  (T(101),ALU(1)),(T(101),ALL(1)),(T(101),ALS(1)),(T(101),AIT(1))
EQUIVALENCE (T(101),SFRH(1)),(T(101),BSTR(1)),(T(101),PYAK(1)),
  (T(101),PYP(1))
EQUIVALENCE (T(101),TOT(1))
EQUIVALENCE (ND(101),1),ND(101),TCS(1)

```

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AUTOFLON CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE COVER  
.....



## CHART TITLE - SUBROUTINE FCOVER

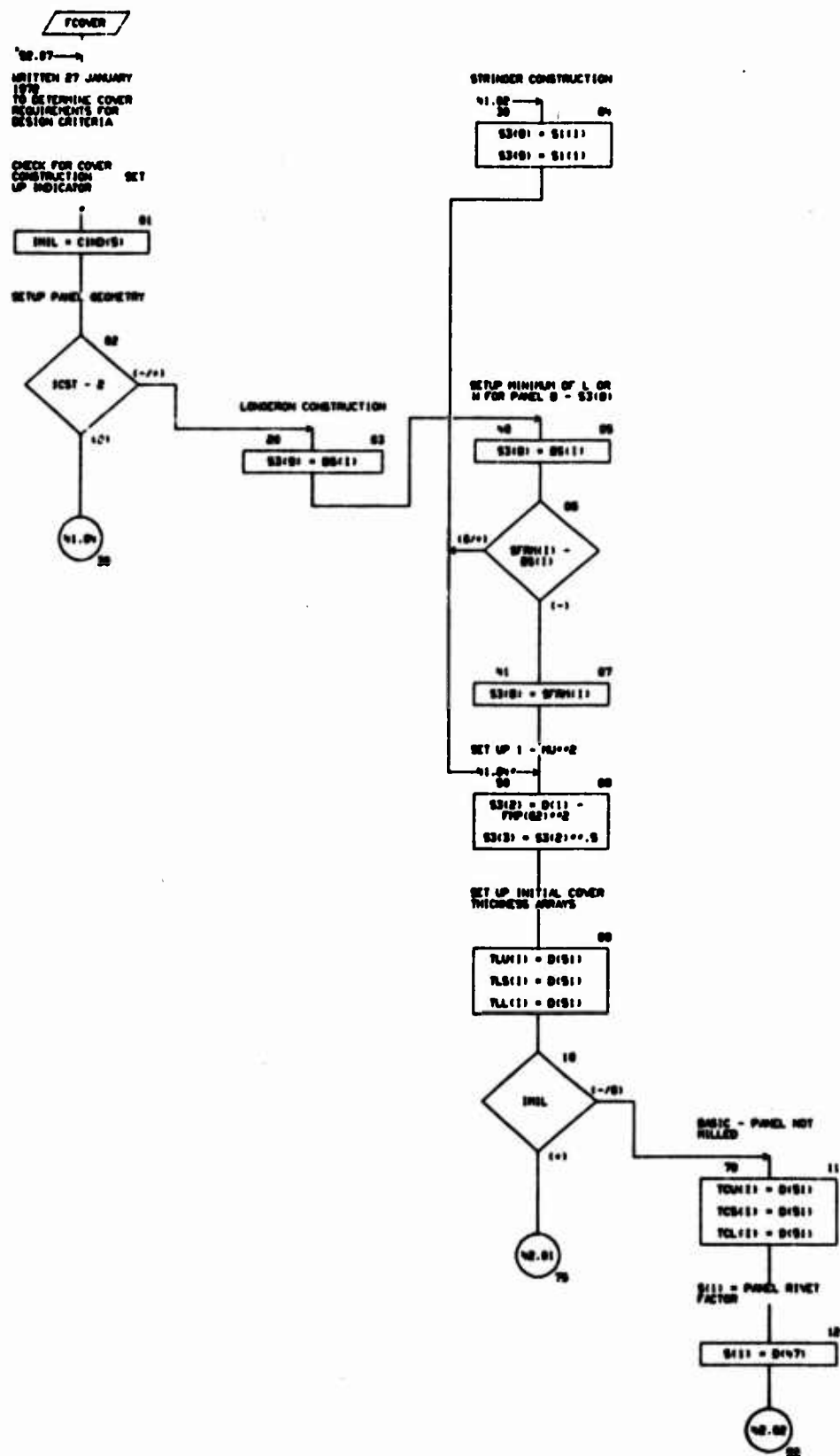
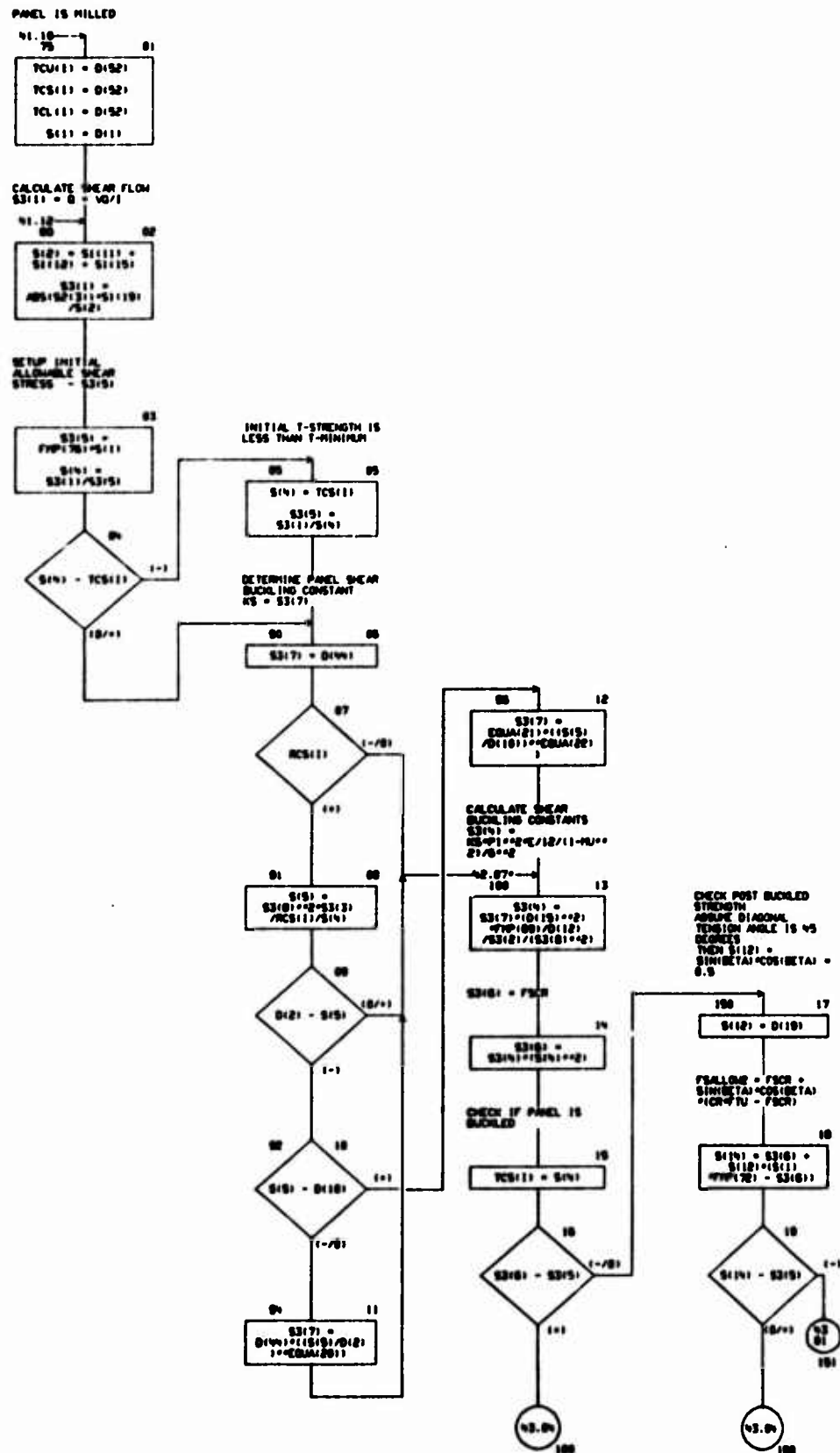


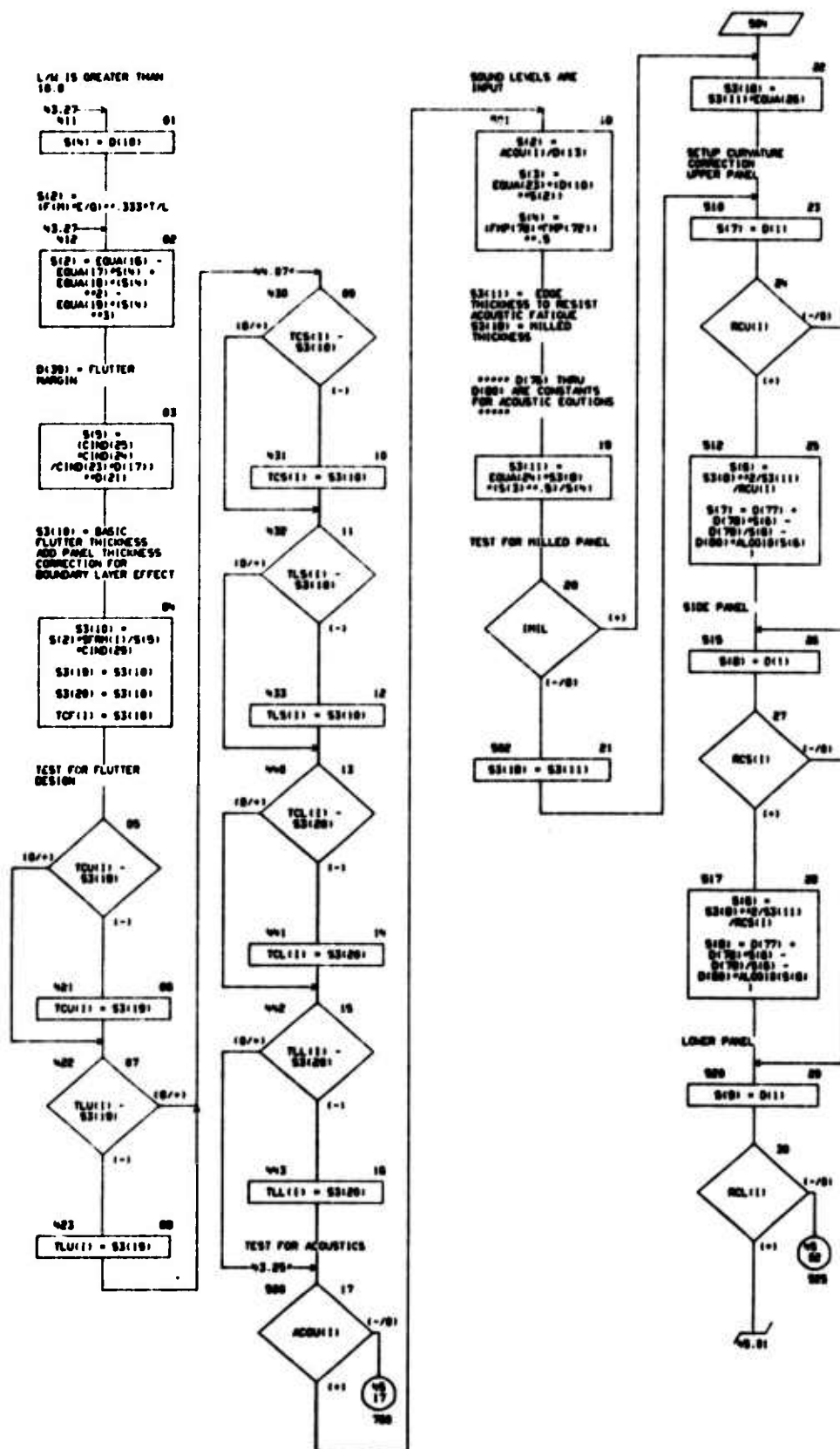
CHART TITLE - SUBROUTINE FCOVER



SOLVE SIMULTANEOUS  
EQUATION FOR PANEL  
THICKNESS



CHART TITLE - SUBROUTINE FCOVER





## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
DIMENSION D(200),T(200),DC(100),ND(200)
DIMENSION EQUA(100)
DIMENSION CIND(50)
DIMENSION PRES(20),RHO(20),ACOU(20)
DIMENSION S(100),S1(20),S2(20),S3(20),S5(20)
DIMENSION ACU(20),ACL(20)
DIMENSION RCS(20),BU(20),BL(20),BS(20),TCU(20),TCS(20),TCL(20),
TLU(20),TLS(20),TLL(20),TCF(20),SFM(20),BSTR(20),FMP(300)
DIMENSION TOT(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(201)),(DC(1),TCOM(401)),
(ND(1),TCOM(401))
EQUIVALENCE (D(61),EQUA(1))
EQUIVALENCE (D(241),CIND(1))
EQUIVALENCE (D(601),PRES(1)),(D(621),RHO(1)),(D(641),ACOU(1))
EQUIVALENCE (T(1),S(1)),(T(101),S1(1)),(T(121),S2(1)),
(T(141),S3(1)),(T(181),S5(1))
EQUIVALENCE (T(201),TOT(1))
EQUIVALENCE (T(241),ACU(1)),(T(261),ACL(1))
EQUIVALENCE (T(281),RCS(1)),(T(301),BU(1)),(T(321),BL(1)),
(T(341),BS(1)),(T(361),TCU(1)),(T(381),TCS(1)),(T(401),TCL(1)),
(T(421),TLU(1)),(T(441),TLS(1)),(T(461),TLL(1)),(T(481),TCF(1)),
(T(501),SFM(1)),(T(521),BSTR(1)),(T(541),FMP(1))
EQUIVALENCE (ND(101),1), (ND(112),K1), (ND(122),IC1),
(ND(125),IMIL)

```

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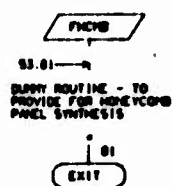
AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 47

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE PUNCH  
.....

CHART TITLE - SUBROUTINE FNCMB





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AUTOFLIGHT CHART SET - SHEEP SECOND FUELAGE OVERLAY

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CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON TCOM(400)

DIMENSION D(2000),Y(2000),DC(100),ND(200)

EQUIVALENCE (D(1),TCOM(1)),(Y(1),TCOM(200)),(DC(1),TCOM(401)),

(ND(1),TCOM(201))

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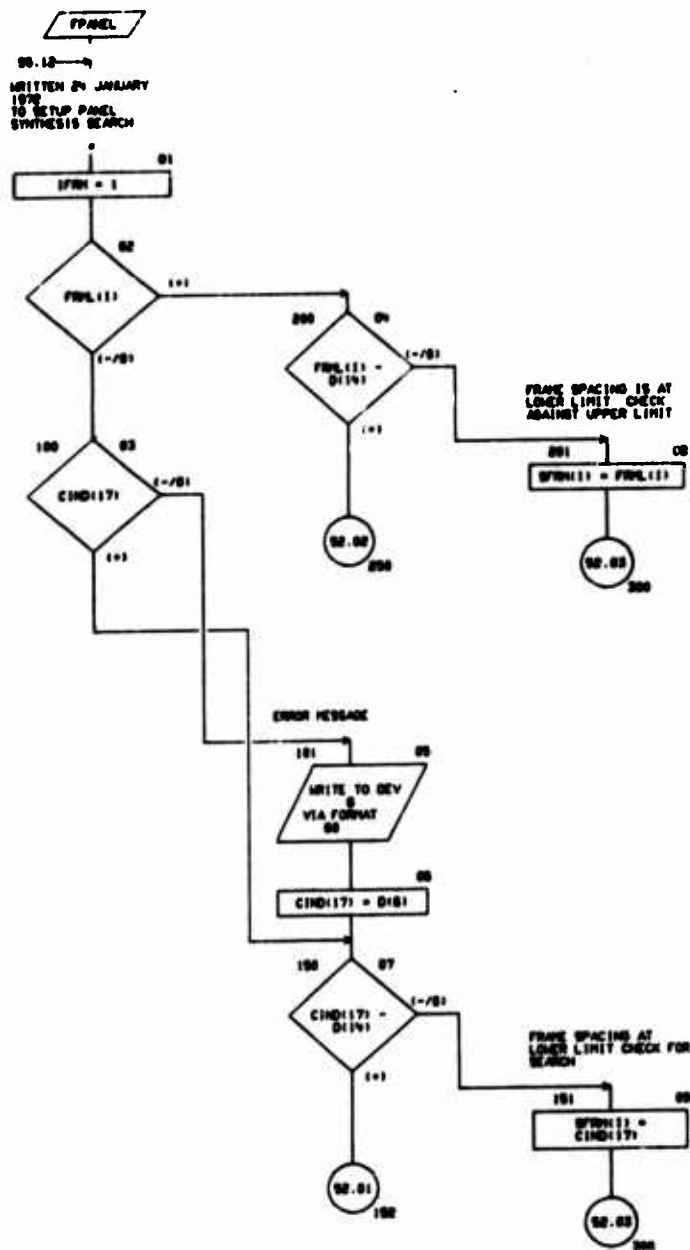
AUTOFLW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 50

CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE PPANEL  
#####

CHART TITLE - SUBROUTINE FPANEL



## CHART TITLE - SUBROUTINE FPAEL

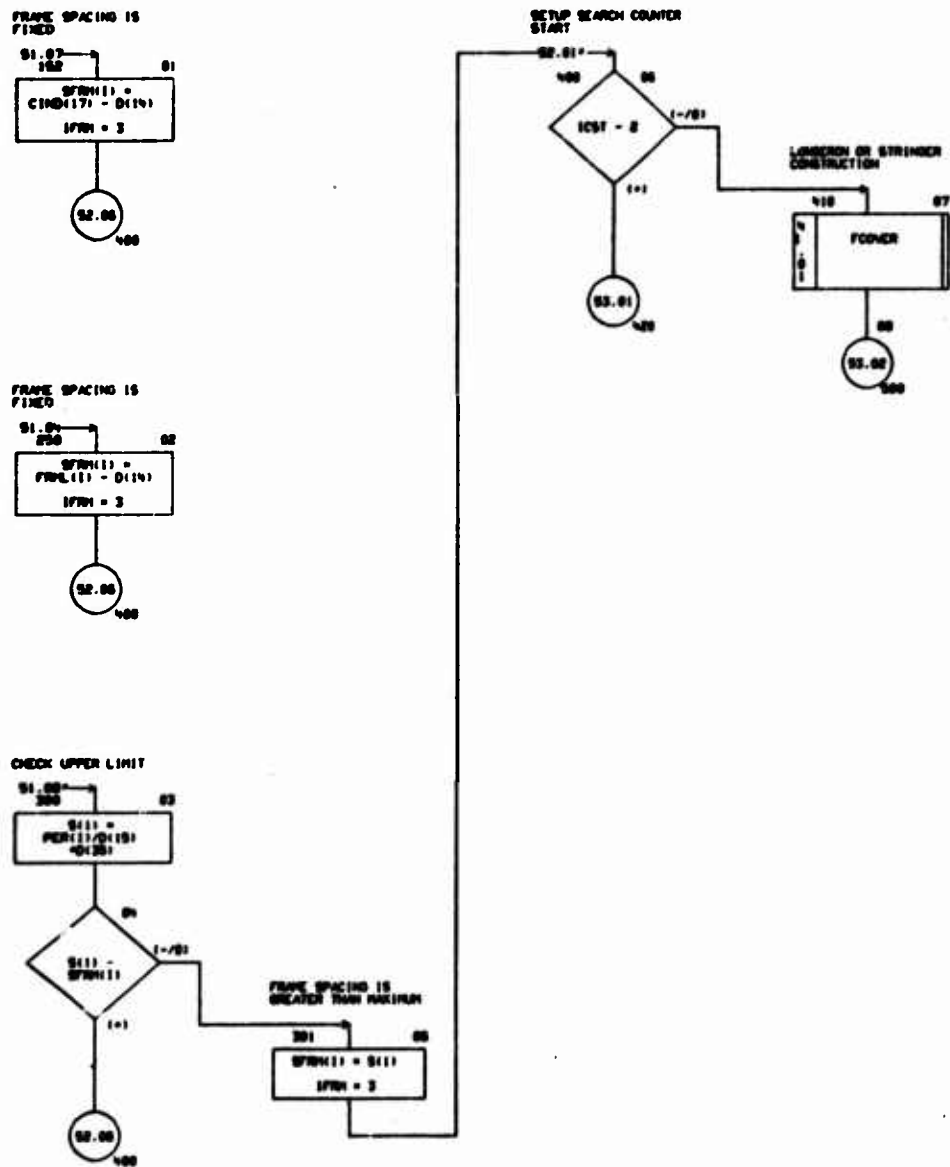


CHART TITLE - SUBROUTINE FPANEL

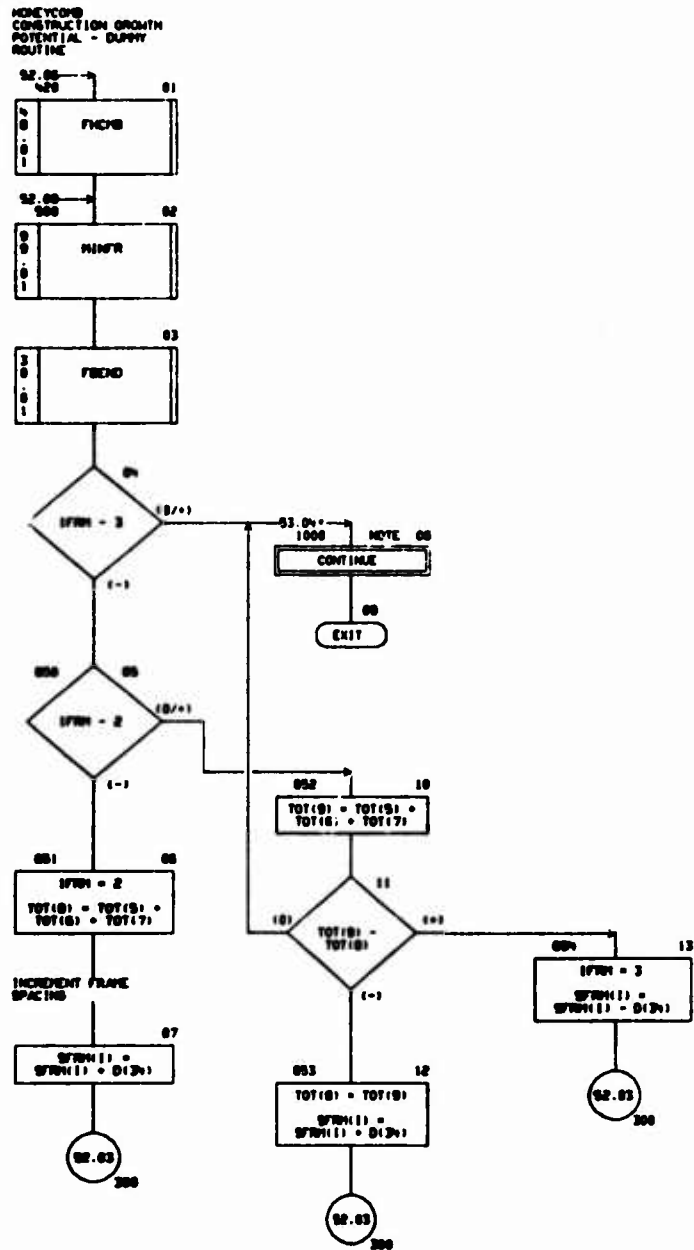


CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON TCON(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION CIND(50)
DIMENSION FRML(20)
DIMENSION S(100),TOT(20),PER(20),SFRM(20)
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(101)),
  (ND(1),TCON(201))
EQUIVALENCE (D(24),CIND(1))
EQUIVALENCE (D(30),FRML(1))
EQUIVALENCE (T(1),S(1)),(T(20),TOT(1)),(T(94),PER(1)),
  (T(98),SFRM(1))
EQUIVALENCE (ND(101),I),(ND(102),J),(ND(102),ICST),(ND(124),IFRM)
GO FORMATING,10X,30H*** FRAME SPACE DEFINITION ERROR ***
//5X,40HGENERAL FRAME SPACING HASBEEN SET AT 6 INCHES)
```

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AUTOFLOW CHART SET - SHEEP

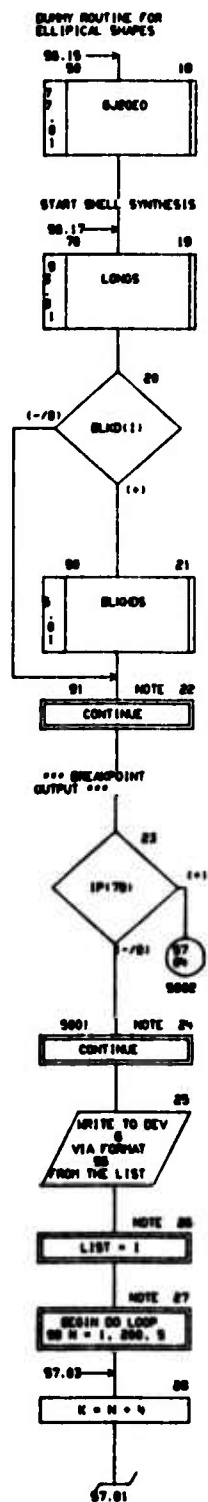
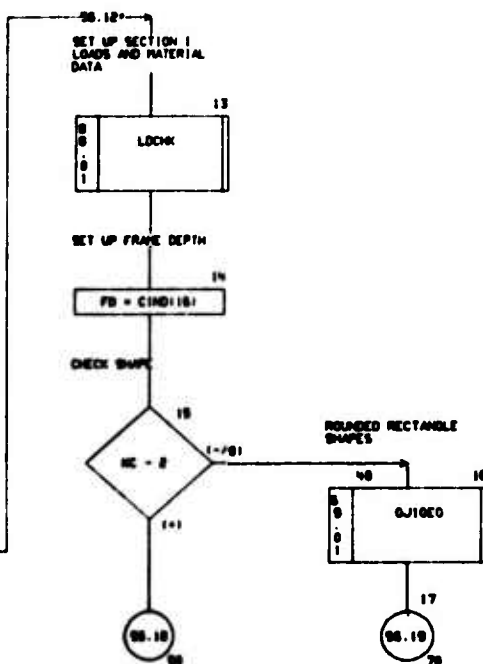
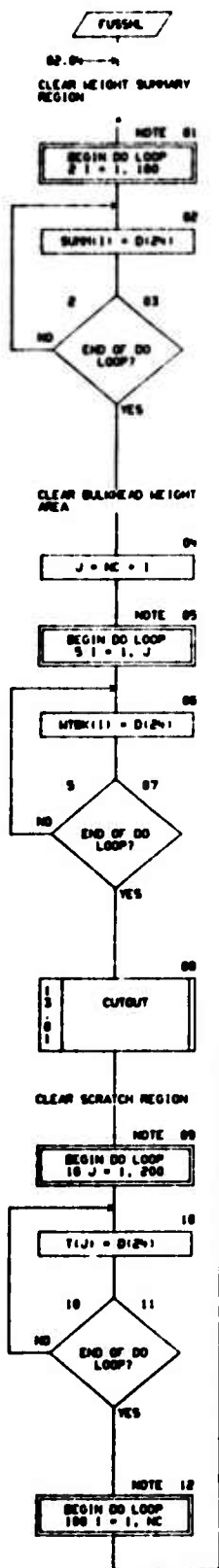
SECOND FUSELAGE OVERLAY

PAGE 95

CHART TITLE - INTRODUCTORY COMMENTS

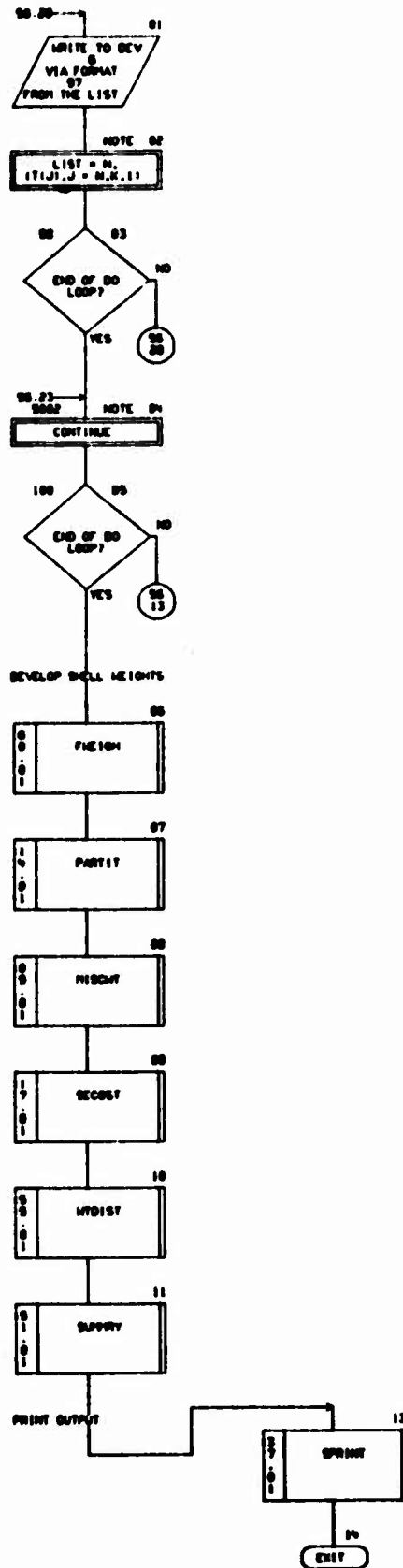
.....  
SUBROUTINE FUSBL  
.....

CHART TITLE - SUBROUTINE FUSHA





## CHART TITLE - SUBROUTINE FUBDL



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
COMMON/PRINT/ IP(80)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION CIND(50)
DIMENSION BLKD(20)
DIMENSION MTBK(20)
DIMENSION SH(20)
DIMENSION SUPN(100)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(2001)),(DC(1),TCOM(401)),
  (ND(1),TCOM(4201))
EQUIVALENCE (D(2),CIND(1))
EQUIVALENCE (D(56),BLKD(1))
EQUIVALENCE (T(16),SH(1)),(SH(1),FD)
EQUIVALENCE (T(103),MTBK(1))
EQUIVALENCE (TCOM(400),SUPN(1))
EQUIVALENCE (ND(10),J), (ND(102),J), (ND(103),K), (ND(105),N)
EQUIVALENCE (ND(11),NC), (ND(112),KC)
96 FORMAT(1H1,20X,4SH*** BREAKPOINT OUTPUT - SUBROUTINE FUSSEL ***
  20X,21H** FUSSEL - IP(70) ****
  20X,7HSECTION,13/ 5X,BHT-REGION)
97 FORMAT(1X,13,5/10.4)

```

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE PUNCH  
.....

CHART TITLE - SUBROUTINE FINEION

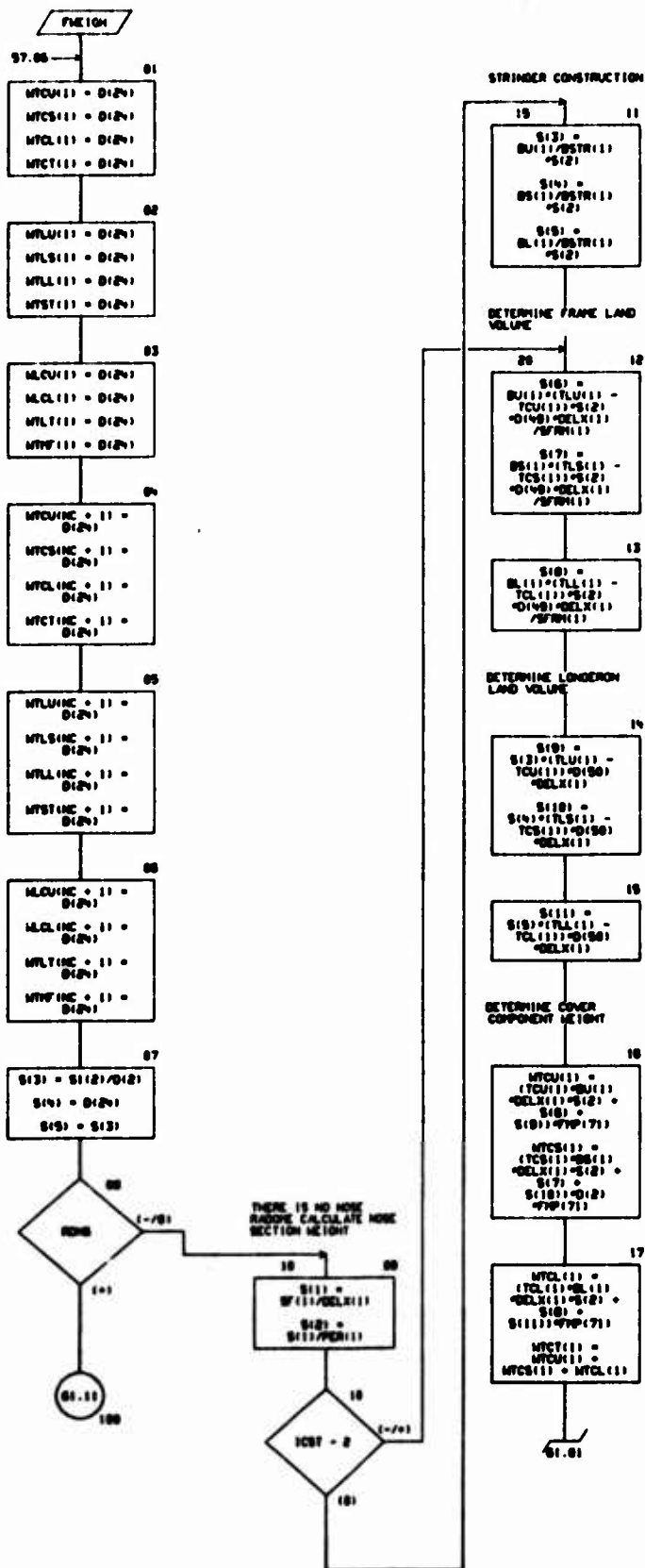




CHART TITLE - SUBROUTINE FUELON

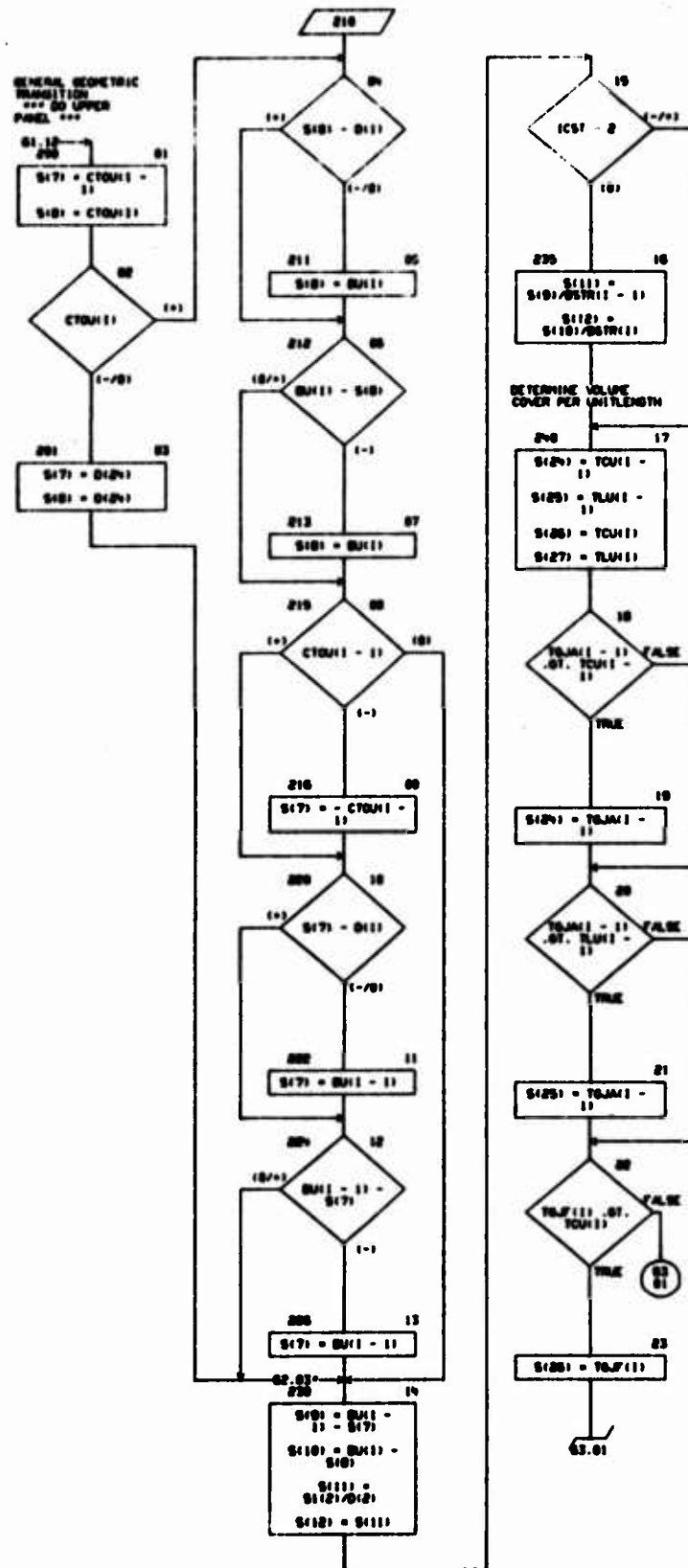




CHART TITLE - SUBROUTINE FWEIGH

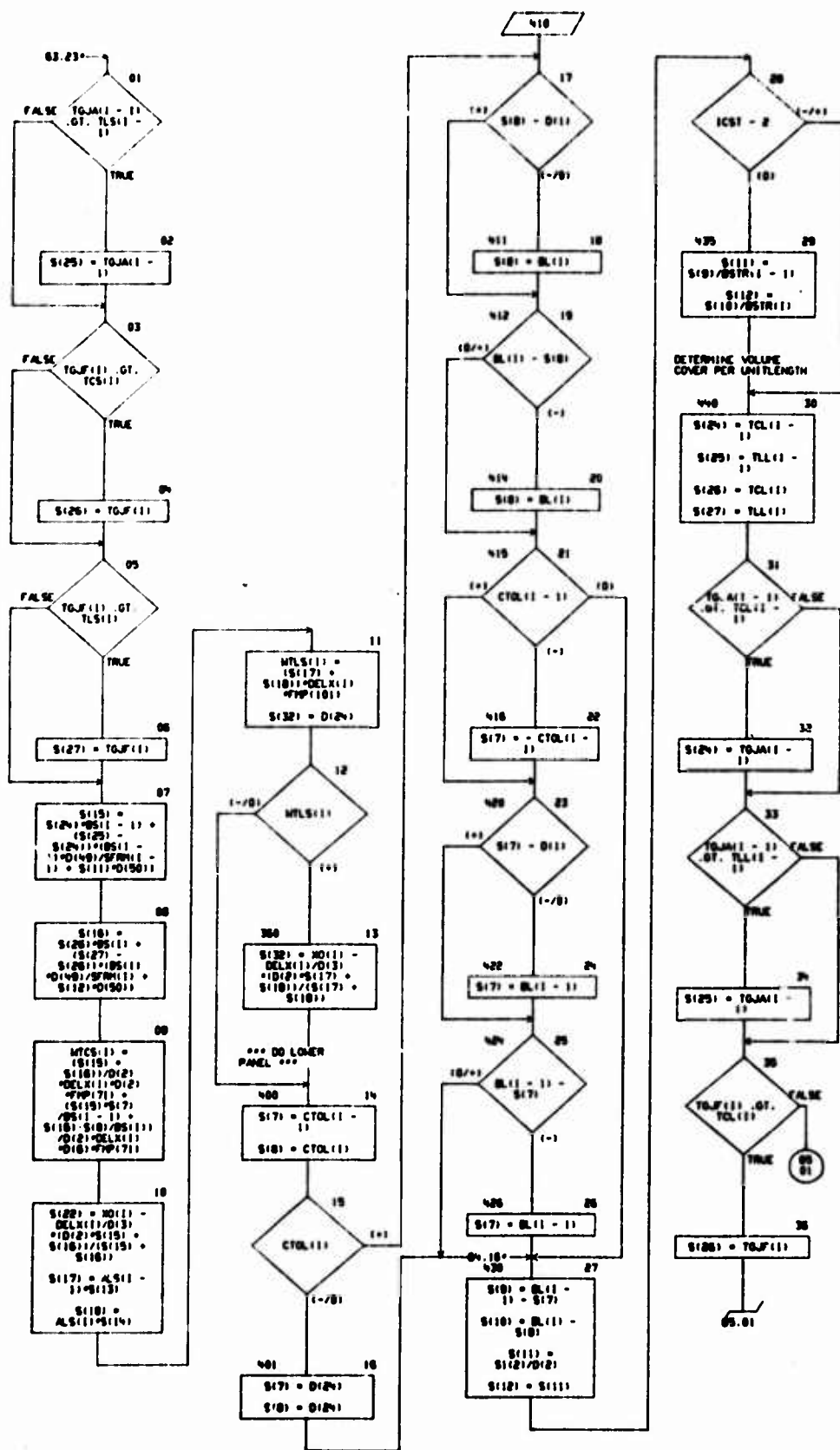
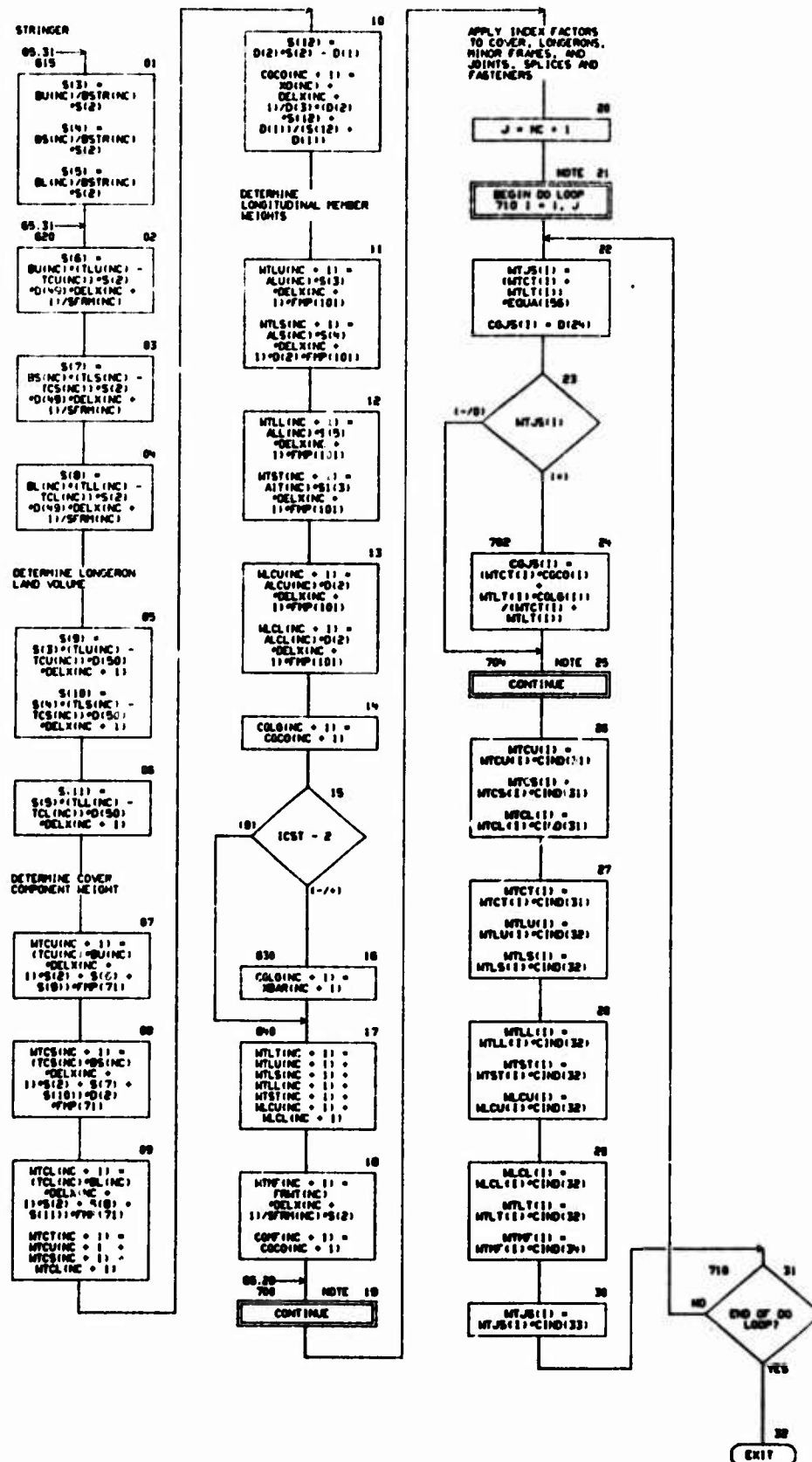






CHART TITLE - SUBROUTINE FWEIGH



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION C(1015),EQUA(160)
DIMENSION NO(20),CTOU(20),CTOL(20),CTOS(20)
DIMENSION SCST(100)
DIMENSION ALCU(20),ALCL(20)
DIMENSION ALCU(20),ALCL(20)
DIMENSION S(100),SI(20)
DIMENSION BU(20),BL(20),BS(20),NBAR(20),DELX(20),SF(20),PER(20)
DIMENSION TCU(20),TCS(20),TCL(20),TLU(20),TLS(20),TLL(20)
DIMENSION TGJ(20),TGJA(20)
DIMENSION ALU(20),ALS(20),ALL(20),AIT(20)
DIMENSION SFRH(20),BSTR(20),FRHT(20),FPH(300)
DIMENSION MTCU(20),MTCS(20),MTCL(20),MTCT(20)
DIMENSION MTLU(20),MTLS(20),MTLL(20),MTST(20),MTLT(20)
DIMENSION MTHF(20),MTJS(20)
DIMENSION COCO(20),COLO(20),COMP(20),COJS(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(2001)),(DC(1),TCOM(4101)),
  (ND(1),TCOM(4201))
EQUIVALENCE (D(81),EQUA(1)),(D(241),CIND(1))
EQUIVALENCE (D(361),NO(1)),(D(461),CTOU(1)),(D(481),CTOL(1)),
  (D(501),CTOS(1))
EQUIVALENCE (D(821),SCST(1)),(SCST(8),ND(8)),(SCST(8),NDCT)
EQUIVALENCE (D(1581),ALCU(1)),(D(1611),ALCL(1))
EQUIVALENCE (D(1631),ALCU(1)),(D(1651),ALCL(1))
EQUIVALENCE (T(1),S(1)),(T(101),SI(1))
EQUIVALENCE (T(1301),BU(1)),(T(1321),BL(1)),(T(1341),BS(1)),
  (T(1361),NBAR(1)),(T(1381),DELX(1)),(T(1401),SF(1)),(T(1421),PER(1))
EQUIVALENCE (T(1621),TCU(1)),(T(1641),TCS(1)),(T(1661),TCL(1)),
  (T(1681),TLU(1)),(T(1701),TLS(1)),(T(1721),TLL(1))
EQUIVALENCE (T(1761),TGJ(1)),(T(1781),TGJA(1))
EQUIVALENCE (T(1801),ALU(1)),(T(1821),ALL(1)),(T(1841),ALS(1)),
  (T(1861),AIT(1))
EQUIVALENCE (T(1881),SFRH(1)),(T(1901),BSTR(1)),(T(1921),FRHT(1)),
  (T(1941),FPH(1))
EQUIVALENCE (T(1961),MTCU(1)),(T(1981),MTCS(1)),(T(1991),MTCL(1)),
  (T(1991),MTCT(1))
EQUIVALENCE (T(1991),MTLU(1)),(T(1991),MTLS(1)),(T(1991),MTLL(1)),
  (T(1991),MTST(1)),(T(1991),MTLT(1))
EQUIVALENCE (T(1991),MTHF(1)),(T(1991),MTJS(1))
EQUIVALENCE (T(1701),COCO(1)),(T(1741),COLO(1)),
  (T(1781),COMP(1)),(T(1781),COJS(1))
EQUIVALENCE (ND(101),1),(ND(102),J)
EQUIVALENCE (ND(111),NC),(ND(102),ICST)

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AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE GJ020  
.....



CHART TITLE - SUBROUTINE GJIGED

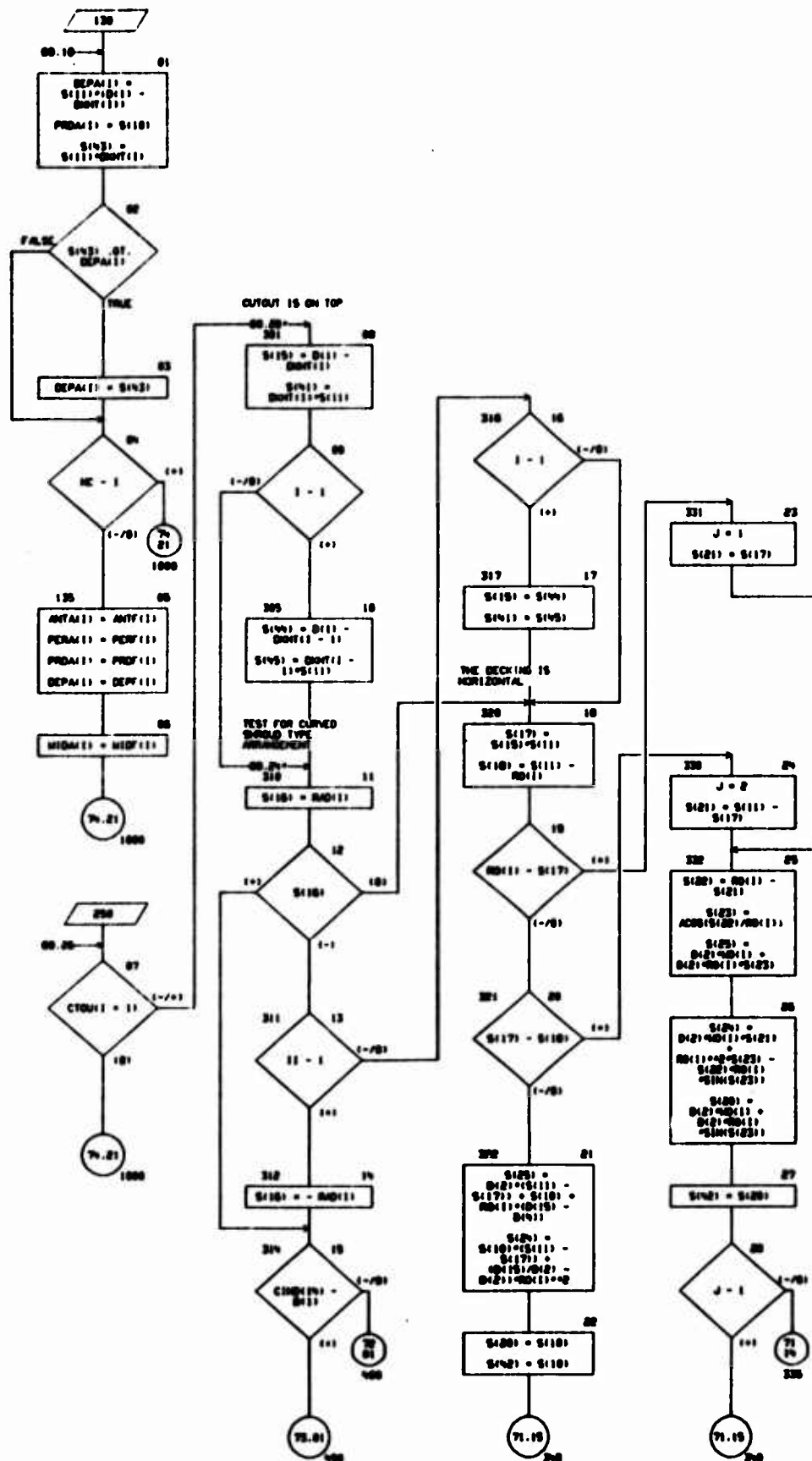
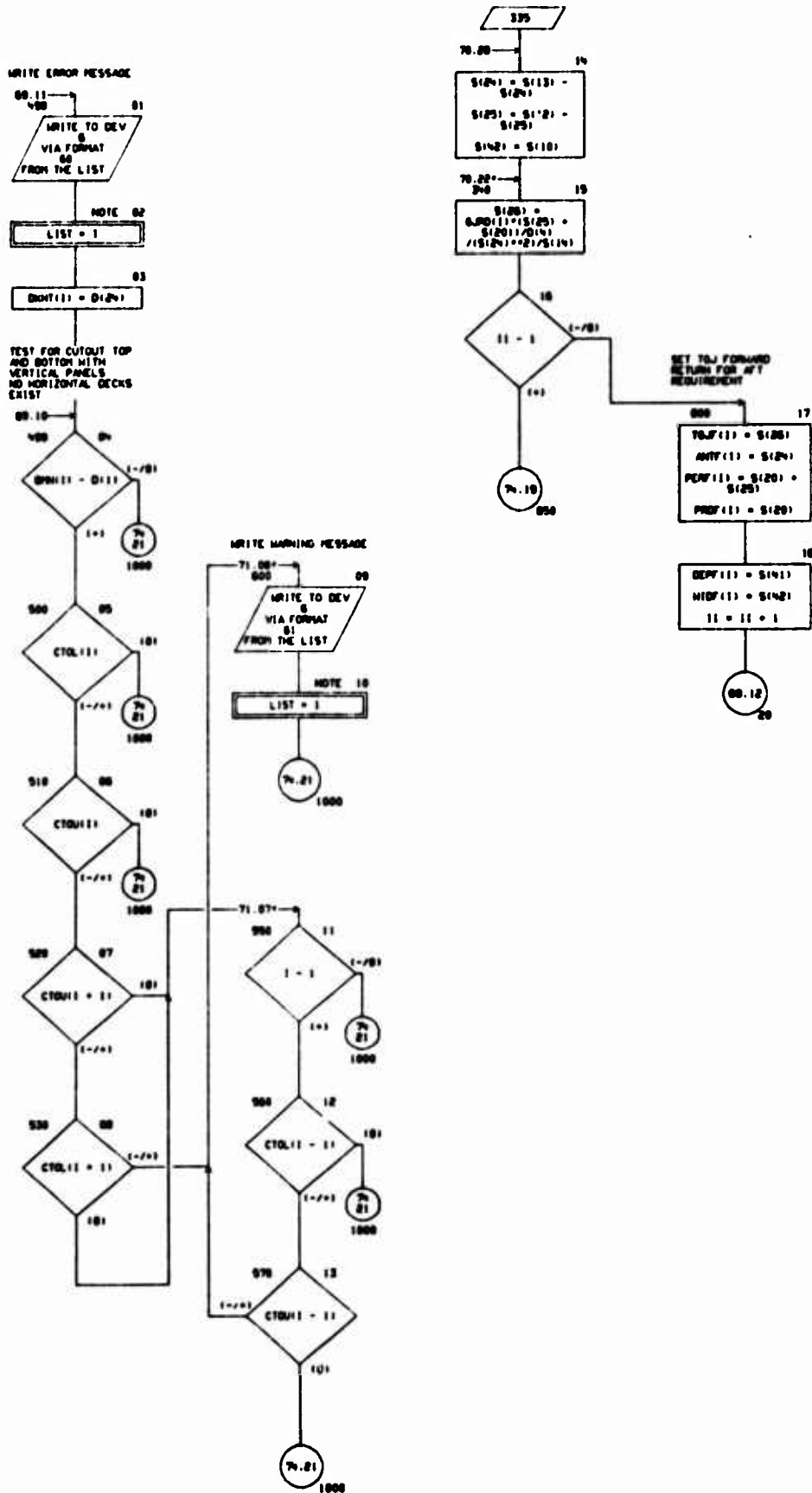


CHART TITLE - SUBROUTINE GJGED



# SINGLE RADIUS SPREAD

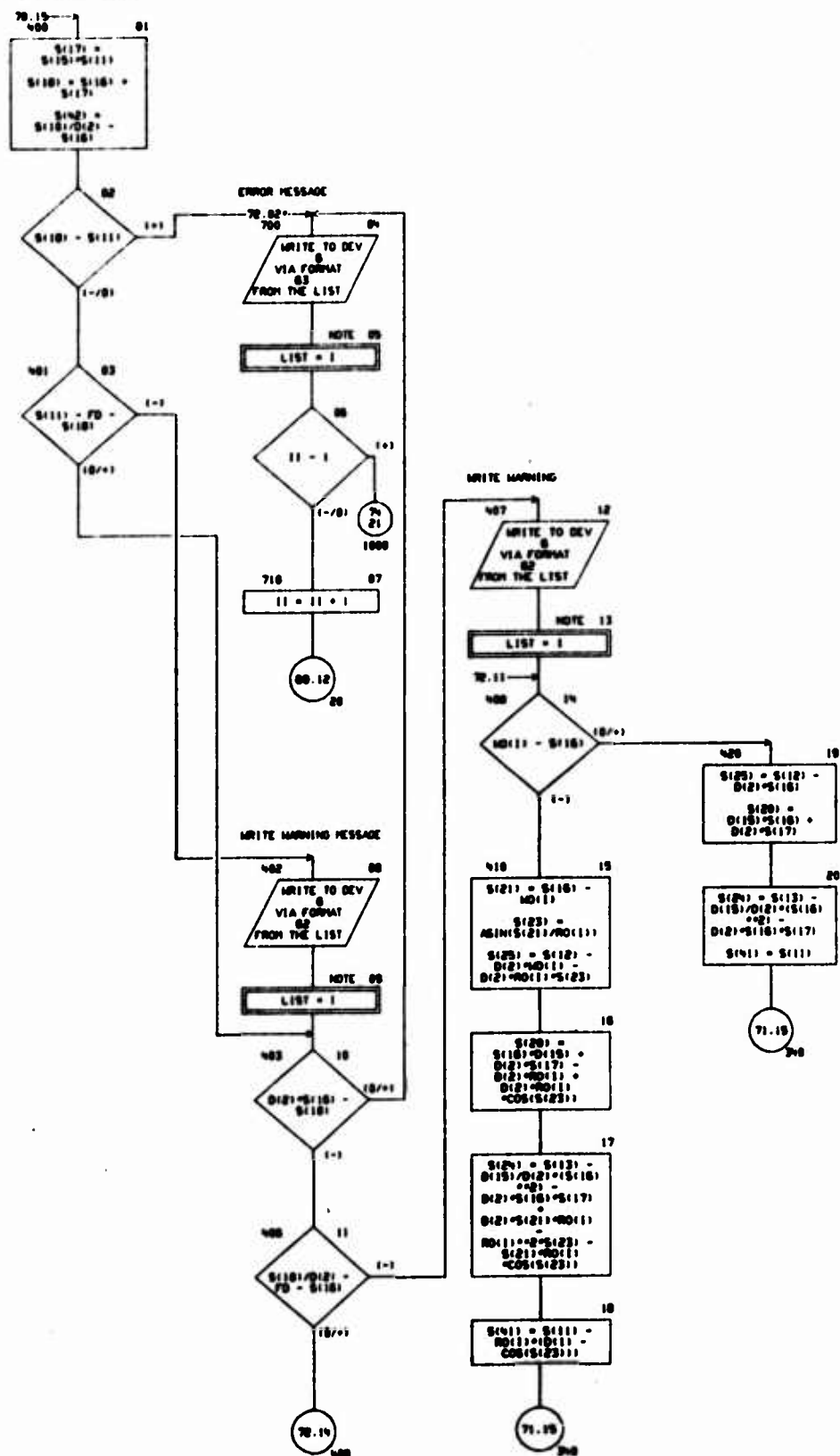




CHART TITLE - SUBROUTINE 6W100

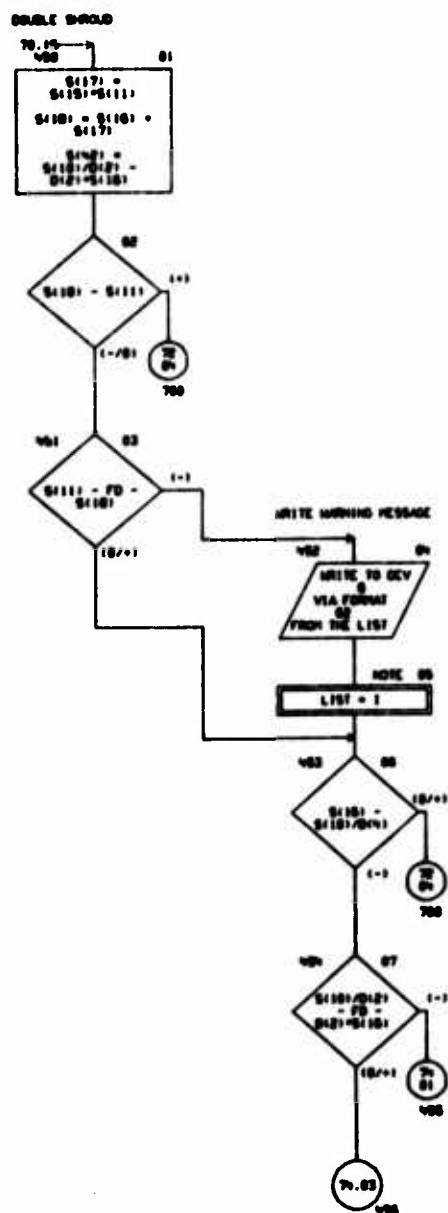


CHART TITLE - SUBROUTINE GJ10E0

WRITE WARNING MESSAGE

73.07  
455  
WRITE TO DEV  
VIA FORMAT  
02  
FROM THE LIST

NOTE 02

LIST = 1

73.07  
456

456  
03  
D(1) = S(16)

1-1

457  
04  
S(11)/D(2) = S(17)

1-1

458  
05  
D(2) = S(11)/D(2) - S(17)

1-1

459  
06  
S(30) = S(16) - D(1)

S(31) = S(17) - S(11)/D(2) - D(2)

S(32) = D(2) - S(16)

07

S(33) = (S(30)\*2 + S(31)\*2)\*.5

08

S(33) = S(33)

1-1

460  
09  
S(32) = 70 - S(33)

1-1

461  
10  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

462  
11  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

463  
12  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

464  
13  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

465  
14  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

466  
15  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

467  
16  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

468  
17  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

469  
18  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

470  
19  
S(21) = S(12) - D(1)\*S(16)

S(22) = S(13) - D(1)\*S(17)

S(41) = S(11)

71.19

SET TOJ AFT

71.19  
050

TOJAX(1) = S(26)

ANTAX(1) = S(24)

PERAX(1) = S(20) + S(25)

PRDAX(1) = S(20)

20

DEPA(1) = S(41)

MIDA(1) = S(42)

21

EXIT

70.04  
1000

NOTE 21

CONTINUE

22

EXIT

```

COMMON TCON(400)
DIMENSION D(200),T(200),DC(100),ND(200)
DIMENSION DMT(20),CTOU(20),CTOL(20),SPH(20),RAD(20),GJRD(20)
DIMENSION CIND(50)
DIMENSION ACRS(20),ANTF(20),ANTA(20),PERF(20),PERA(20),PROF(20),
PRDA(20)
DIMENSION DEFF(20),DEPA(20),MIDF(20),MIDA(20)
DIMENSION S(100),DOO(20),MD(20),RD(20),TOLF(20),TOLJA(20),TYP(200)
DIMENSION SN(20)
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(401)),
(ND(1),TCON(420))
EQUIVALENCE (D(24),CIND(1))
EQUIVALENCE (D(44),DMT(1))
EQUIVALENCE (D(46),CTOU(1),D(48),CTOL(1))
EQUIVALENCE (D(52),RAD(1),D(54),SPH(1))
EQUIVALENCE (D(70),GJRD(1))
EQUIVALENCE (D(110),ACRS(1),D(112),ANTF(1),
D(114),ANTA(1),D(116),PERF(1),D(118),PERA(1),
D(120),PROF(1),D(122),PRDA(1))
EQUIVALENCE (D(124),DEFF(1),D(126),DEPA(1),
D(128),MIDF(1),D(130),MIDA(1))
EQUIVALENCE (T(1),S(1)),(T(44),DOO(1)),(T(46),MD(1)),
(T(48),RD(1)),(T(70),TOLF(1)),(T(72),TOLJA(1)),
(T(201),TYP(1))
EQUIVALENCE (T(16),SN(1))
EQUIVALENCE (SN(1),TD)
EQUIVALENCE (ND(10),1),(ND(100),J),(ND(107),1)
EQUIVALENCE (ND(11),NC)
80  FORMAT(1H,10X,21H*** ERROR MESSAGE ***,//BX,
    BWDHECK INPUT DATA SET SECTION,13,3H,17HDECK HEIGHT ERROR)
81  FORMAT(1H,21H** WARNING MESSAGE **,//BX,7HSECTION,13,3H,
    57HOUTUT TOP AND BOTTON IS BEYOND THE SCOPE OF THIS PROGRAM)
82  FORMAT(1H,10X,21H** WARNING MESSAGE **,//BX,7HSECTION,13,3H,
    55HROUND DATA - OUTOUT - FRAME DEPTH IS LESS THAN NOTED)
83  FORMAT(1H,10X,21H*** ERROR MESSAGE ***,//BX,
    BWDHECK INPUT DATA SET SECTION,13,3H,
    27HDECK HEIGHT OR RADIUS ERROR)

```

04/10/76

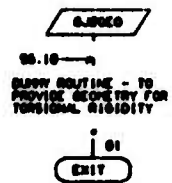
AUTOFLW CHART SET - SHEEP

SECOND FUSELAGE OVERLAY

PAGE 70

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE GJ200  
.....



04/10/74

AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 78

CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON TCON(4400)

DIMENSION D(2000),T(2000),DC(100),IND(200)

EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(101)),  
(IND(1),TCON(4201))

04/10/74

AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 79

CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE EILONG  
#####

CHART TITLE - SUBROUTINE IILONG

IILONG

93.00  
 WRITTEN 24 JANUARY  
 1972  
 TO DEVELOP UNIT  
 INERTIAS FOR ROUNDED  
 RECTANGLE SHAPES

CALCULATE UNIT COVER  
 INERTIAS

01  
 $S1(4) = D(2) * (RO(1) + DOO(1))$

02  
 $S1(5) = D(2) * (MO(1) + RO(1))$   
 $+ DOO(1) * 2 + RO(1) * (RO(1) + 2 * D(8) * (D(15) + D(2)) + RO(1) * DOO(1) + D(25) + DOO(1) * 2 * D(15) / D(4))$

03  
 $S1(6) = S1(5)$

04  
 $S1(7) = D(2) * (MO(1) + 5 * D(3) + RO(1) * (RO(1) + 2 * D(8) * (D(15) + D(2)) + RO(1) * DOO(1) + D(25) + DOO(1) * 2 * D(15) / D(4))$

05  
 $S1(8) = S1(7)$

06  
 $S1(9) = D(4) * (DOO(1) + 5 * D(3) + RO(1) * (RO(1) + 2 * D(8) * (D(15) + D(2)) + RO(1) * DOO(1) + D(25) + DOO(1) * 2 * D(15) / D(4))$

07  
 $S1(10) = D(4) * (DOO(1) + RO(1) + MO(1) * 2 + RO(1) * (RO(1) + 2 * D(8) * (D(15) + D(2)) + RO(1) * DOO(1) + D(25) + DOO(1) * 2 * D(15) / D(4))$

CLEAR BENDING ELEMENT  
 SECTION PROPERTIES

NOTE 08  
 BEGIN DO LOOP  
 IS J = 11, 20

09  
 $S1(J) = D(24)$

10  
 END OF DO  
 LOOP?

11  
 ICST = CONSTRUCTION  
 INDICATOR  
 $S1(11) = \text{STRINGER}$   
 $S1(12) = \text{SPACING}$   
 $S1(13) = \text{NUMBER OF}$   
 $\text{SECONDARY LONGS}$

12  
 $ICST = 2$

13  
 $S1(13) = S1(13)$

14  
 $S1(14) = S1(13)$

15  
 $S1(20) = S1(14) * RO(1) + MO(1)$

$S1(11) = \text{LONGERON}$   
 $\text{DEPTH TO}$   
 $\text{SECTION-HEIGHT RATIO}$

16  
 $S1(11) = S1(11) * RO(1) + DOO(1)$   
 $S1(12) = S1(11) * 2$

17  
 $S1(17) = S1(11)$   
 $S1(17) = (S1(11) / D(2) + (DOO(1) + RO(1) * 2 * S1(13))$

18  
 $S1(18) = S1(11) - DOO(1)$

19  
 $S1(13) = S1(18) / D(2) + MO(1) * 2$   
 $S1(14) = S1(13)$   
 $S1(20) = S1(18) / D(4) + MO(1)$

20  
 $S1(13) = S1(13)$

21  
 $S1(20) = S1(13) * RO(1) + MO(1)$

22  
 $S1(14) = S1(13)$

23  
 $S1(20) = S1(14) * RO(1) + MO(1)$

24  
 $S1(11) = S1(11) - DOO(1)$   
 $S1(13) = \text{ACOS}(S1(2) / RO(1))$   
 $S1(13) = S1(2) / D(2) * RO(1) + \text{SIN}(S1(3)) * MO(1) * 2$

25  
 $S1(14) = S1(13)$

26  
 $S1(20) = S1(14) * RO(1) + MO(1)$

27  
 $S1(14) = S1(13)$

28  
 $S1(20) = S1(14) * RO(1) + MO(1)$

29  
 $S1(14) = S1(13)$

30  
 $S1(20) = S1(14) * RO(1) + MO(1)$



CHART TITLE - SUBROUTINE 11LONG

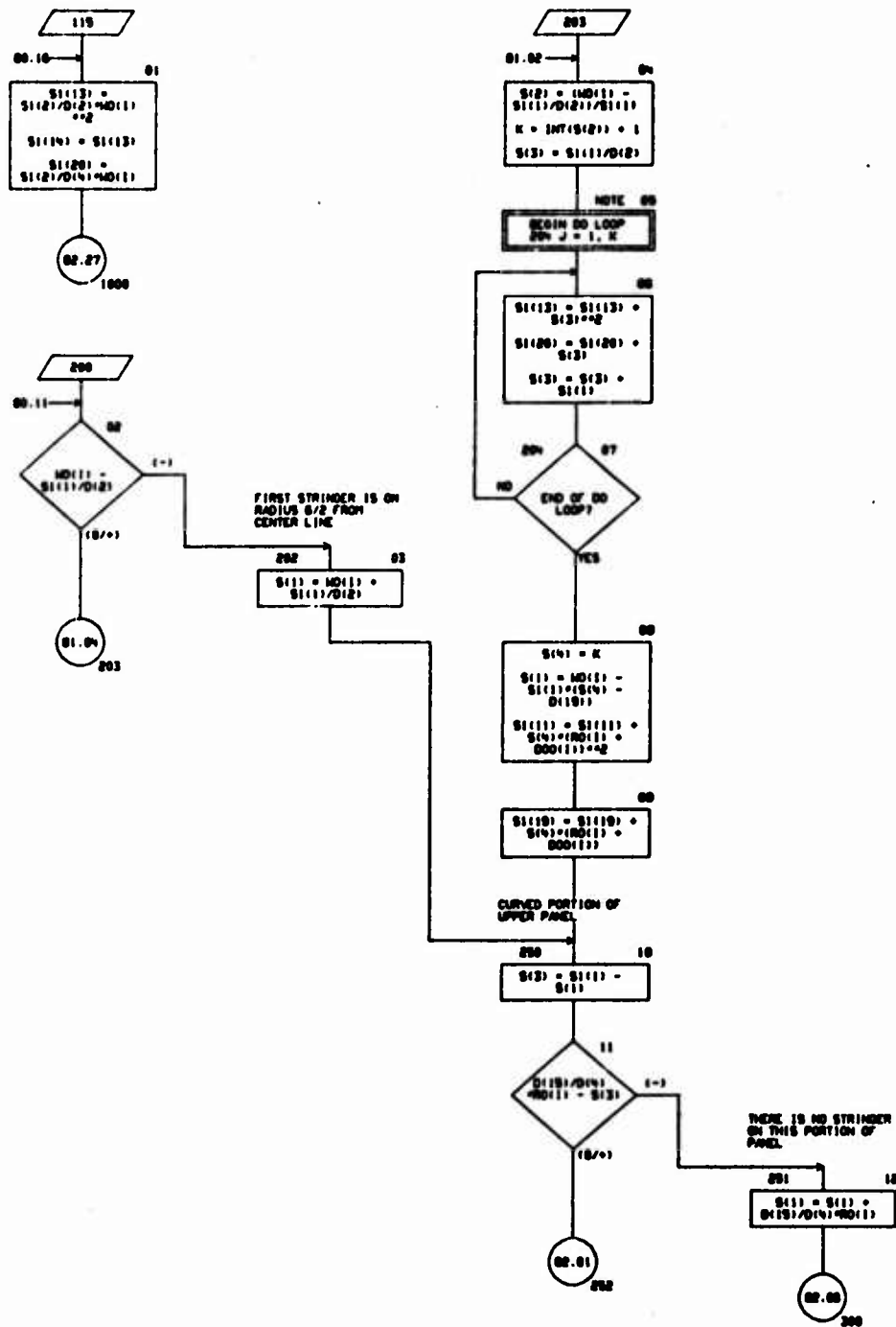


CHART TITLE - SUBROUTINE TILONG

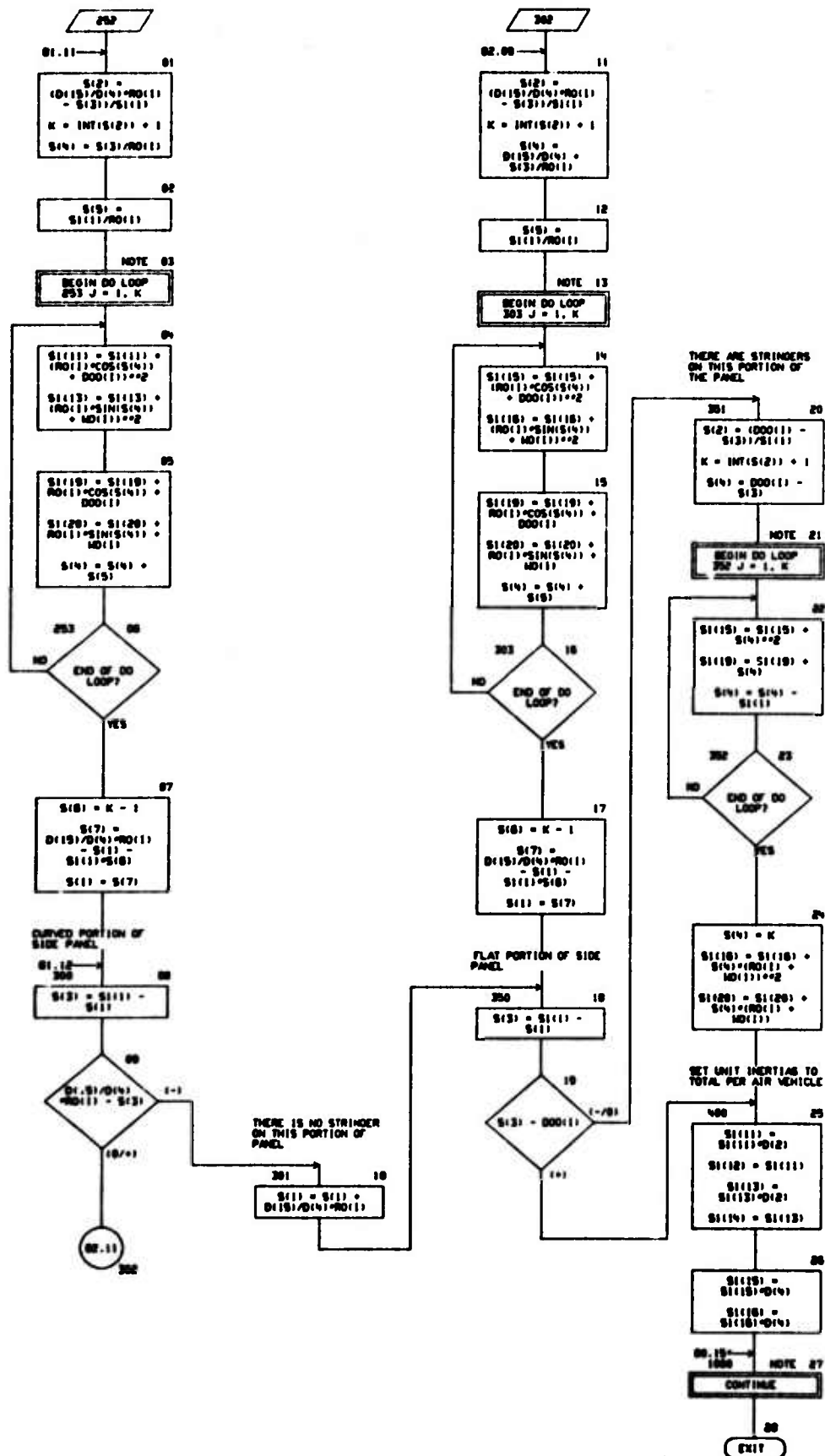


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCON(400)
DIMENSION O(200),T(200),DC(100),ND(200)
DIMENSION S(100),S(20)
DIMENSION DOO(20),MO(20),RO(20)
EQUIVALENCE (O(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(401)),
(ND(1),TCON(401))
EQUIVALENCE (T(1),S(1)),(T(101),S(1))
EQUIVALENCE (T(401),DOO(1)),(T(401),MO(1)),(T(401),RO(1))
EQUIVALENCE (ND(101),J),(ND(102),J),(ND(103),K)
EQUIVALENCE (ND(102),ICST)
    
```

04/18/74

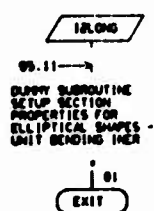
AUTOFLW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 04

CHART TITLE - INTRODUCTORY COMMENTS

\*\*\*\*\*  
SUBROUTINE IZLOND  
\*\*\*\*\*

CHART TITLE - SUBOUTLINE 18L06



04/10/74

AUTOFLON CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 00

PRINT TITLE FOR TOPGRAPHY STATEMENT

COMMON TCON(4400)

DIMENSION D(2000),T(2000),DC(100),ND(200)

EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(2001)),(DC(1),TCON(4101)),

(ND(1),TCON(4201))

04/10/74

AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 07

CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE LOCK#  
#####

CHART TITLE - SUBROUTINE LOCK

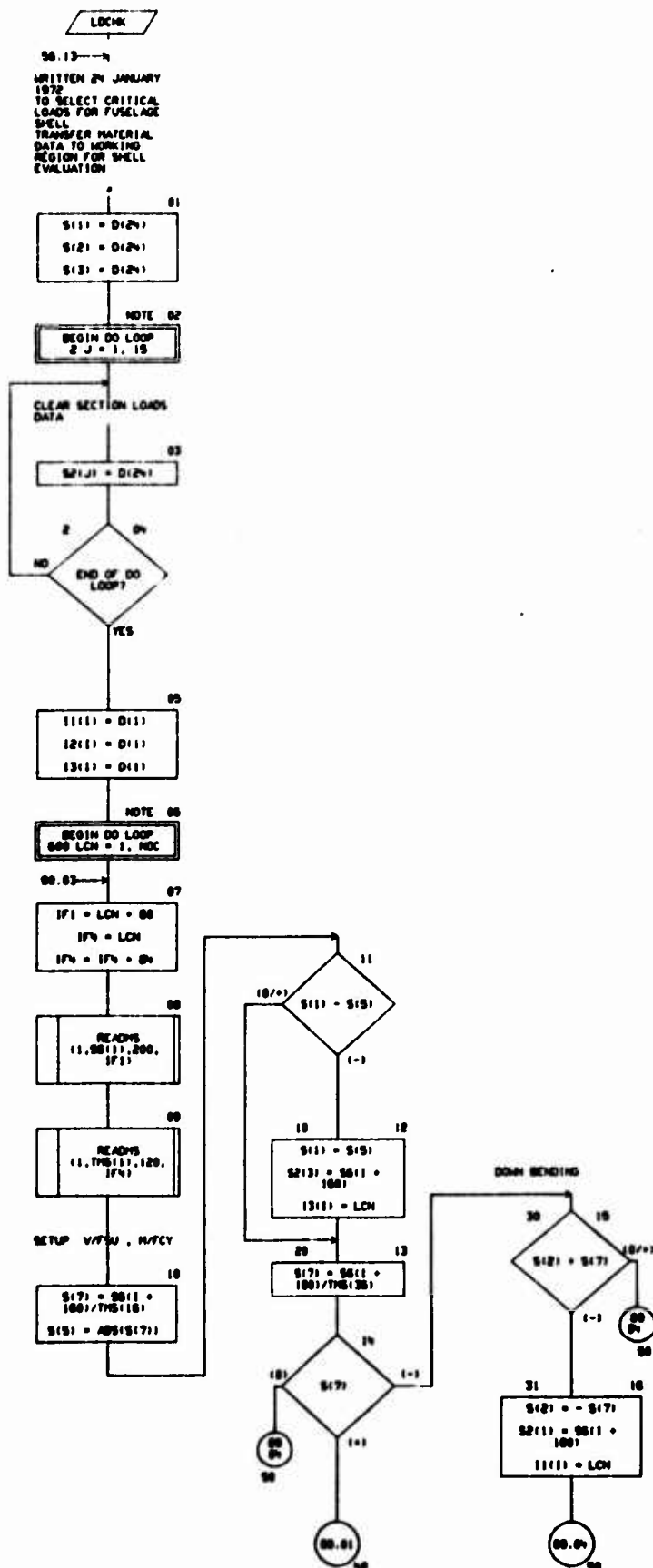




CHART TITLE - SUBROUTINE LOCK

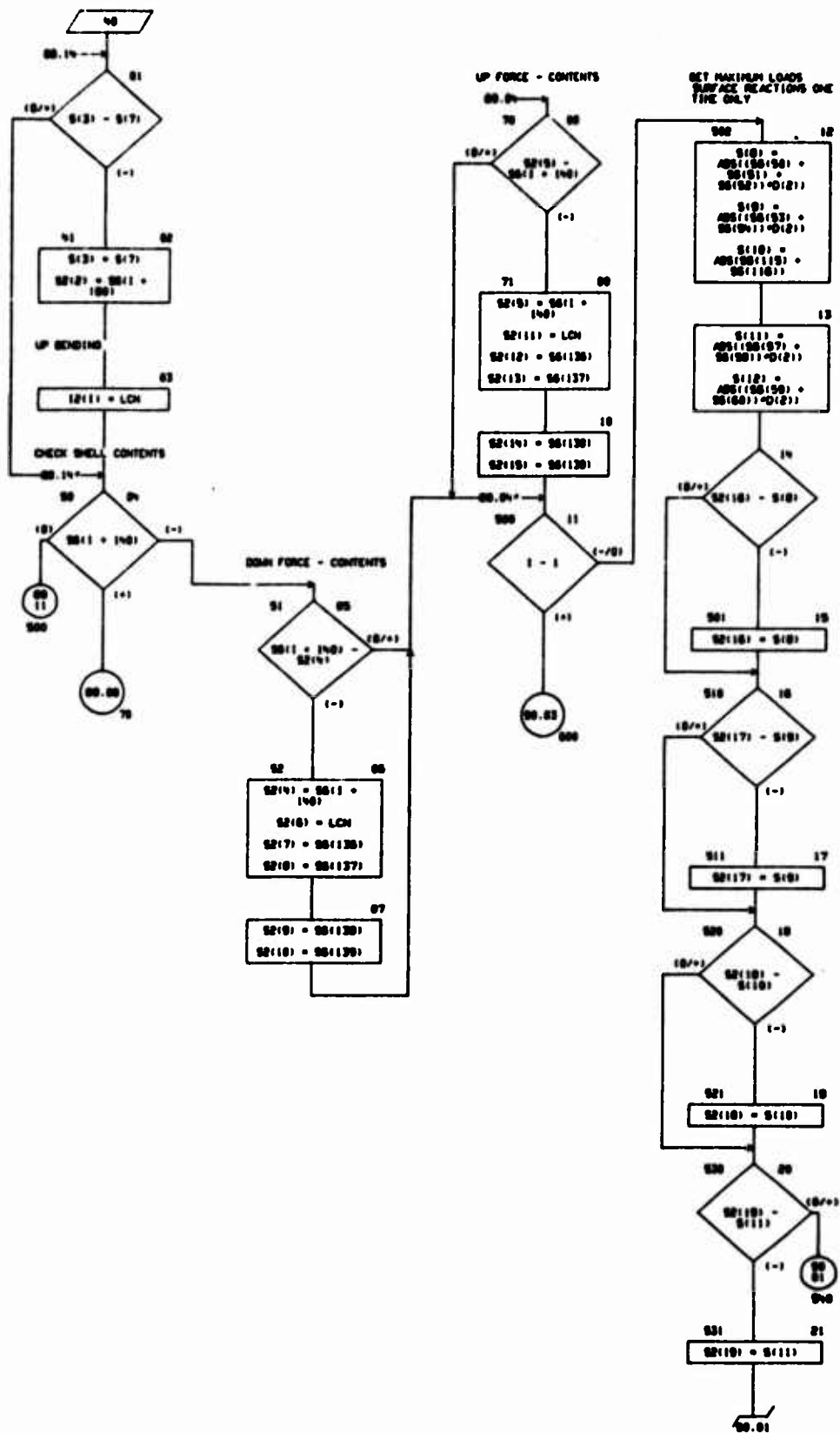
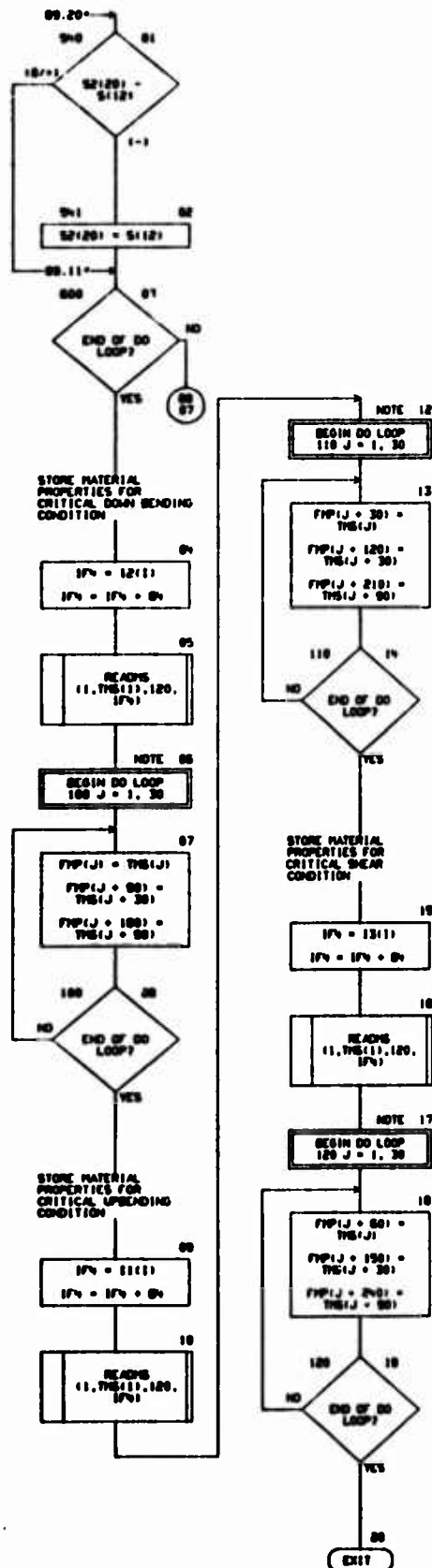


CHART TITLE - SUBROUTINE LCHN:



\*\*\*\*\*

```
COMMON TCON(400)
DIMENSION S(200),T(200),DC(100),ND(200)
DIMENSION THS(120)
DIMENSION S(100),S2(20),FYP(200),SS(200)
DIMENSION I1(20),I2(20),I3(20)
EQUIVALENCE (S(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(100)),
             (ND(1),TCON(400))
EQUIVALENCE (S(120),THS(1))
EQUIVALENCE (T(1),S(1)),(T(120),S2(1)),(T(120),FYP(1))
EQUIVALENCE (T(100),SS(1))
EQUIVALENCE (ND(10),I1(1),ND(10),I1(2),ND(10),I1(3),ND(10),I1(4),
             (ND(114),LCH),ND(115),NOC)
EQUIVALENCE (ND(14),I1(1)),ND(10),I2(1)),ND(10),I3(1))
```

04/10/74

AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

PAGE 02

CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE LONGS  
#####

CHART TITLE - SUBROUTINE LONGS

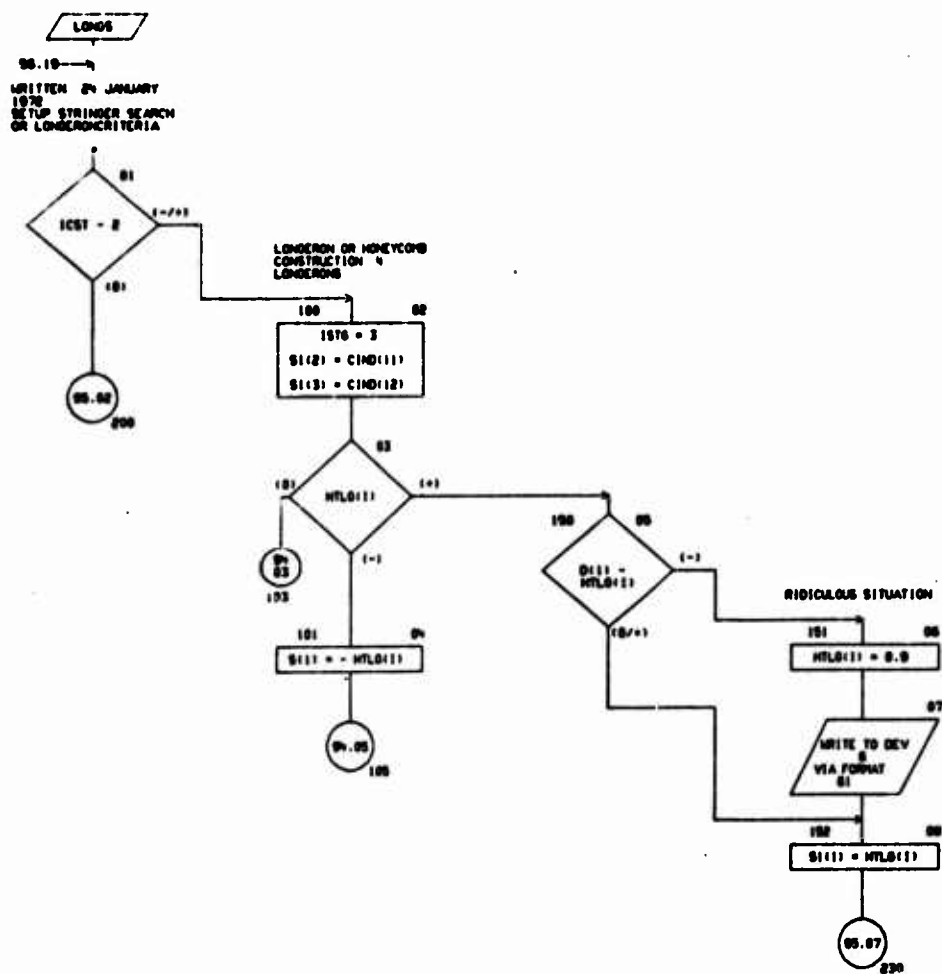
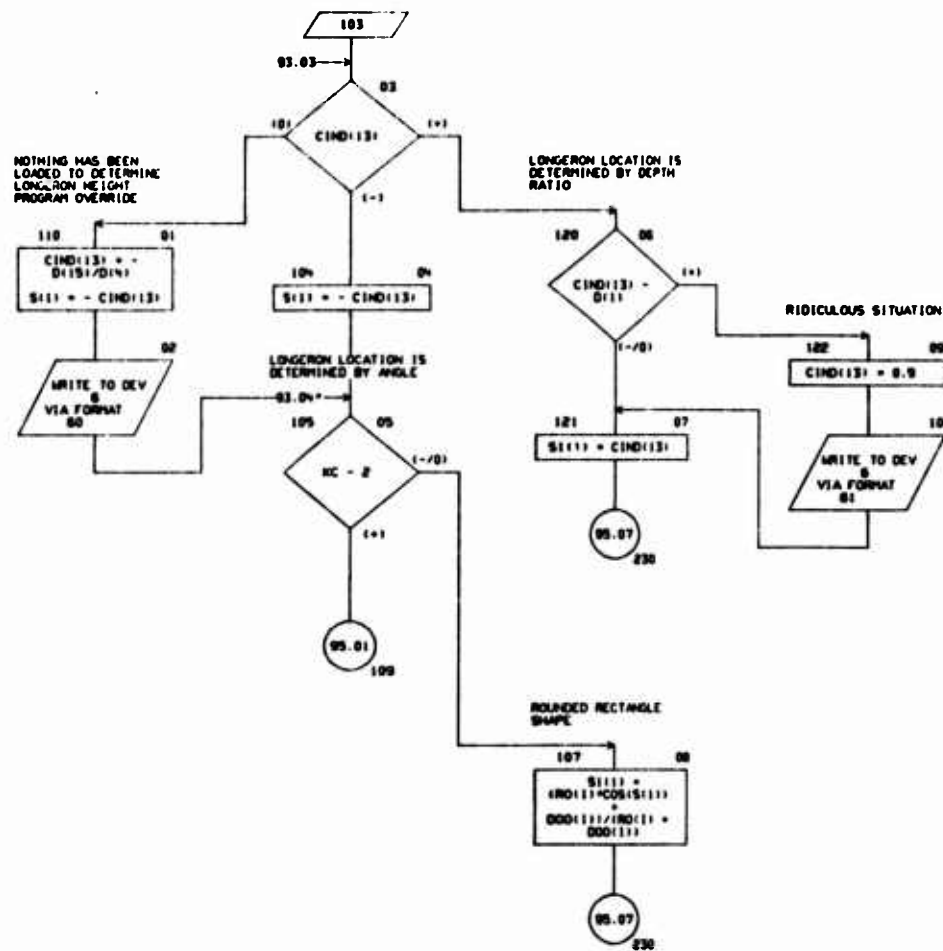


CHART TITLE - SUBROUTINE LOGS





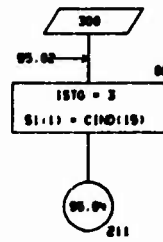




CHART TITLE: NO. 10-1170-01-01 STATEMENT:

```

COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),MO(200)
DIMENSION CIND(50)
DIMENSION MTLG(20)
DIMENSION S(100),S1(20),TOT(20),DOO(20),MO(20),RO(20),PER(20)
DIMENSION STNO(20),BSTR(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(410)),
(INO(1),TCOM(420))
EQUIVALENCE (D(2),CIND(1))
EQUIVALENCE (D(42),MTLG(1))
EQUIVALENCE (T(1),S(1)),(T(10),S(10)),(T(20),TOT(1)),
(T(41),DOO(1)),(T(46),MO(1)),(T(48),RO(1)),(T(54),PER(1))
EQUIVALENCE (T(90),STNO(1)),(T(92),BSTR(1))
EQUIVALENCE (IND(10),I),(IND(11),NC),(IND(12),ICST),
(IND(13),ISTG)
00  FORMAT(1H0,10X,20H*** LONGERON DEPTH ERROR ***,
//BX,30HPROGRAM OVERRIDE ALPHA = P/4)
01  FORMAT(1H0,10X,20H*** LONGERON DEPTH ERROR ***,
//TX,30HPROGRAM OVERRIDE HEIGHT RATIO = 0.0)

```

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE MINFR  
.....

CHART TITLE - SUBROUTINE MINFR

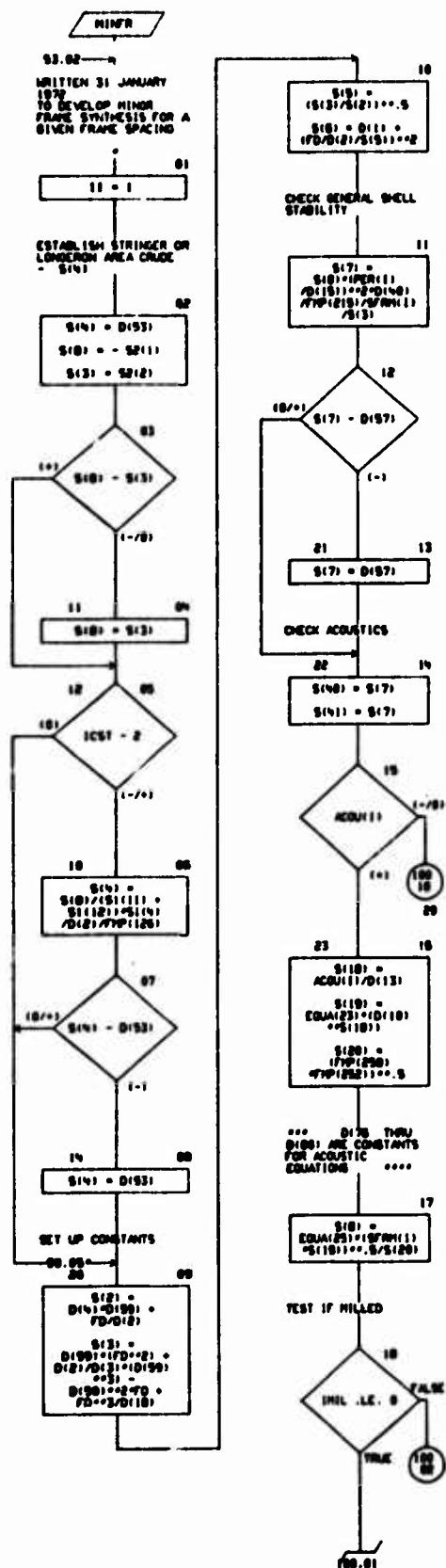
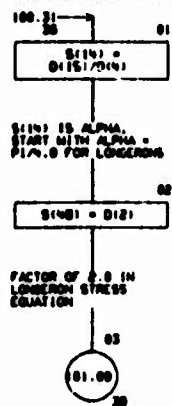




CHART TITLE - SUBROUTINE MINFR

## LONGERON CONSTRUCTION



## STRINGER CONSTRUCTION

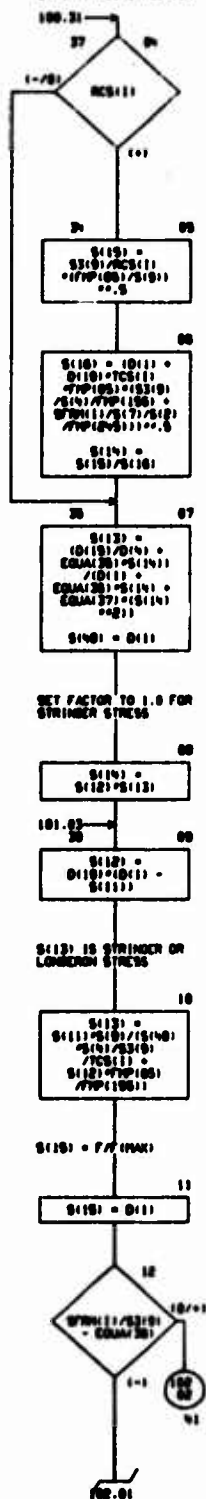


CHART TITLE - SUBROUTINE MINFR

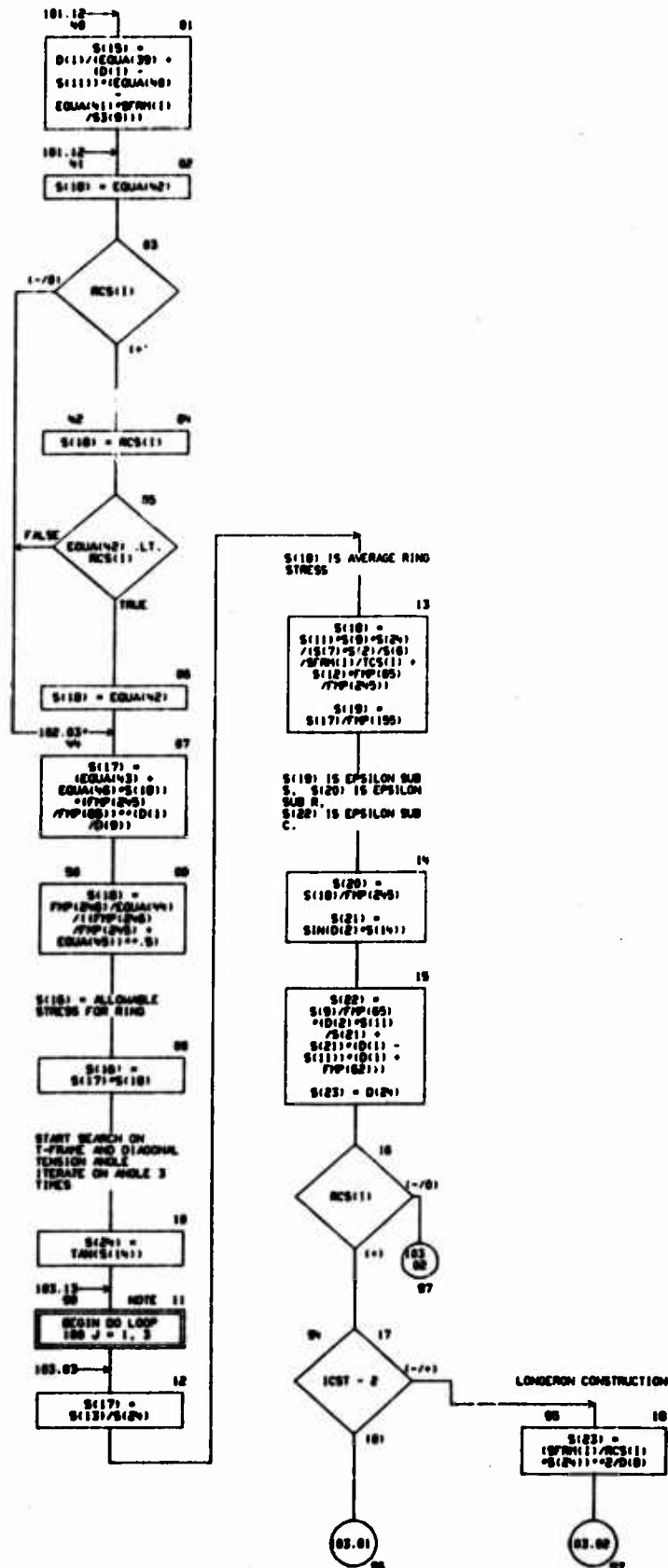


CHART TITLE: ADMIRALTY MINOR

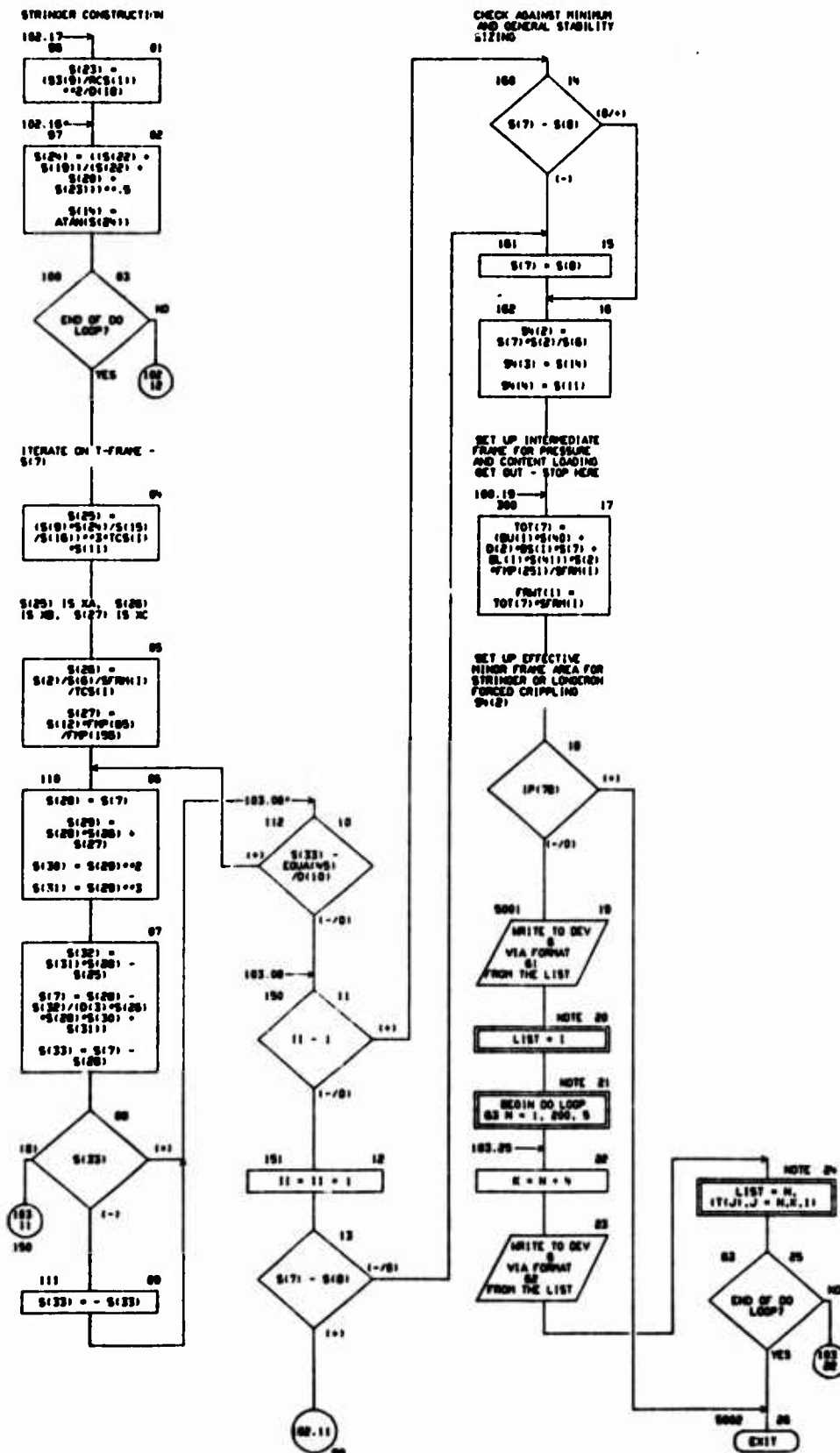


CHART TITLE - NON-PROCEDURAL STATEMENT

```

COMMON TCOM(400)
COMMON /PRINT/ IP(80)
DIMENSION D(200), T(200), DC(100), NO(200)
DIMENSION EQUA(100)
DIMENSION ACQU(20)
DIMENSION S(100), S1(20), S2(20), S3(20), RCU(20), RCL(20),
      RCS(20), PER(20), TCS(20), SFRM(20), FMP(300)
DIMENSION TOT(20), BU(20), BL(20), BS(20)
DIMENSION SW(20)
DIMENSION FRNT(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(401)),
      (NO(1),TCOM(420))
EQUIVALENCE (D(8),EQUA(1))
EQUIVALENCE (D(84),ACQU(1))
EQUIVALENCE (T(1),S(1)),(T(10),S(11)),(T(12),S(13)),
      (T(14),S(15)),(T(24),RCU(1)),(T(26),RCL(1)),(T(28),RCS(1))
EQUIVALENCE (T(54),PER(1)),(T(64),TCS(1)),(T(66),SFRM(1)),
      (T(120),FMP(1))
EQUIVALENCE (T(20),TOT(1)),(T(30),BU(1)),(T(32),BL(1)),
      (T(34),BS(1))
EQUIVALENCE (T(16),SW(1)),(SW(1),FD)
EQUIVALENCE (T(94),FRNT(1))
EQUIVALENCE (NO(10),J), (NO(102),J1), (NO(107),J1), (NO(122),ICST)
EQUIVALENCE (IMIL,NO(125))
61  FORMAT(1H,20X,45H*** BREAKPOINT OUTPUT - SUBROUTINE MINFR ***
      24X,20H** MINFR - IP(78) ****
      20X,7HSECTION,13/ 5X,BHT-REGION)
62  FORMAT(4X,13,5F10.4)

```



CHART TITLE - INTRODUCTORY COMMENTS

```

*****
SUBROUTINE MINIMUM
*****
    
```

CHART TITLE - SUBROUTINE WINPLM

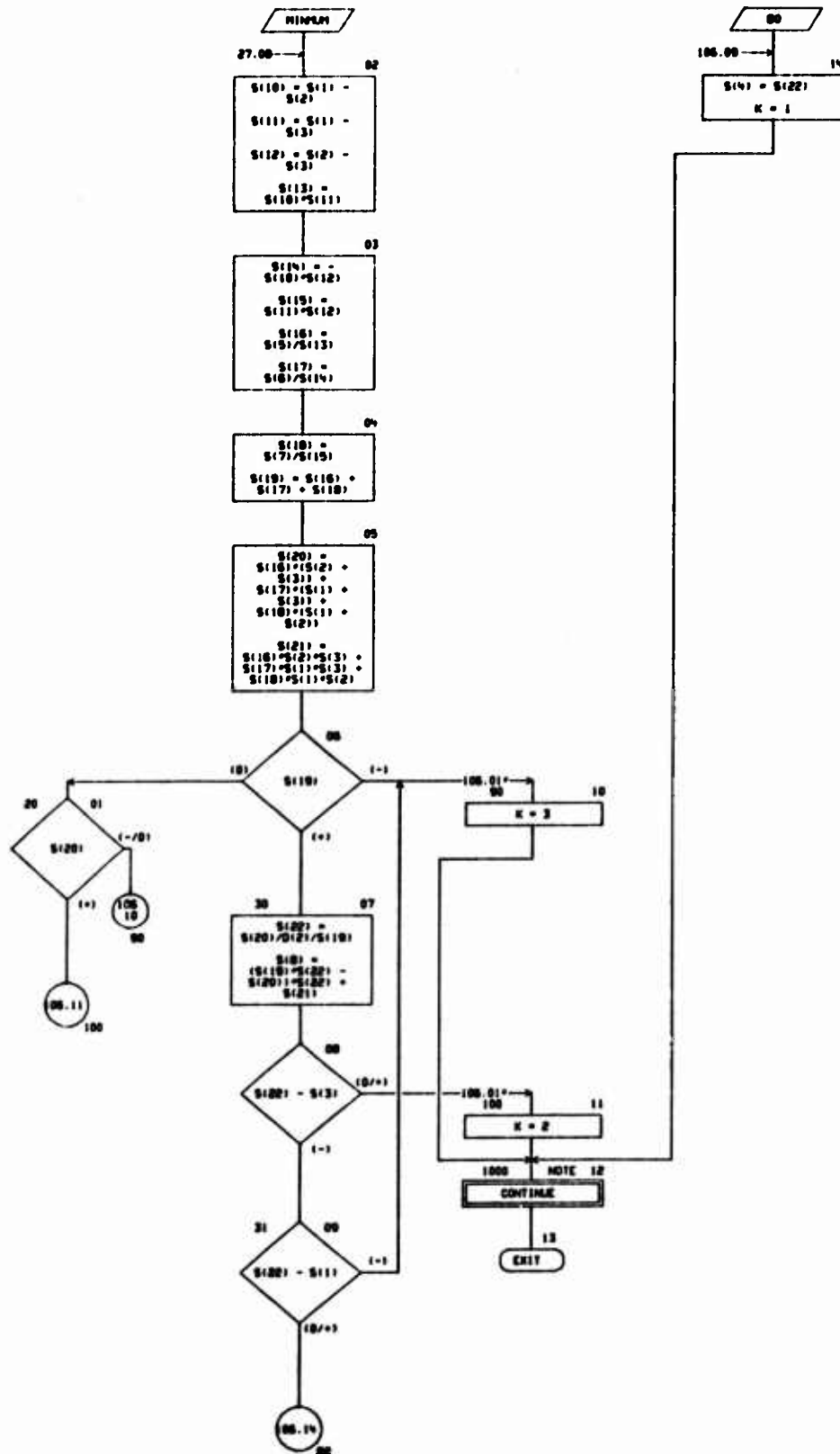


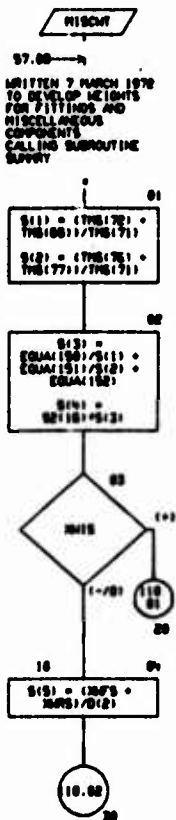
CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON TCON(400)  
DIMENSION D(200),T(200),DC(100),MD(200)  
DIMENSION S(100)  
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(410)),  
(MD(1),TCON(420))  
EQUIVALENCE (T(1),S(1))  
EQUIVALENCE (MD(100),K)
```

CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE MISCHT  
.....

CHART TITLE - SUBROUTINE MISCWT





```

graph TD
    110[/110/] --> 110.17[110.17]
    110.17 --> 111{SCDT(27)}
    111 --> 112[112]
    112 --> 112.02[112.02]
    112.02 --> 112.01[112.01]
    112.01 --> 112.02
    112.02 --> 112.03[112.03]
    112.03 --> 112.04[112.04]
    112.04 --> 112.05[112.05]
    112.05 --> 112.06[112.06]
    112.06 --> 112.07[112.07]
    112.07 --> 112.08[112.08]
    112.08 --> 112.09[112.09]
    112.09 --> 112.10[112.10]
    112.10 --> 112.11[112.11]
    112.11 --> 112.12[112.12]
    112.12 --> 112.13[112.13]
    112.13 --> 112.14[112.14]
    112.14 --> 112.15[112.15]
    112.15 --> 112.16[112.16]
    112.16 --> 112.17[112.17]
    112.17 --> 112.18[112.18]
    112.18 --> 112.19[112.19]
    112.19 --> 112.20[112.20]
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    112.21 --> 112.22[112.22]
    112.22 --> 112.23[112.23]
    112.23 --> 112.24[112.24]
    112.24 --> 112.25[112.25]
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    113.41 --> 113.42[113.42]
    113.42 --> 113.43[113.
```

## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION EQUA(100)
DIMENSION NO(20),SCST(100),SCDT(80)
DIMENSION PER(20)
DIMENSION S2(100)
DIMENSION TMS(120)
DIMENSION FMT(9)
DIMENSION SUPP(100)
DIMENSION S(100),S2(20)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(401)),
(ND(1),TCOM(801))
EQUIVALENCE (D(81),EQUA(1))
EQUIVALENCE (D(181),NO(1)),(D(182),SCST(1)),(D(183),SCDT(1))
EQUIVALENCE (D(1801),S2(1))
EQUIVALENCE (D(1281),TMS(1))
EQUIVALENCE (D(1918),FMT(1))
EQUIVALENCE (T(94),PER(1))
EQUIVALENCE (TCOM(4001),SUPP(1))
EQUIVALENCE (T(1),S(1)),(T(121),S2(1))
EQUIVALENCE (S2(12),XVFS),(S2(13),XVRS),(S2(14),XVLS),
(S2(15),XVFS),(S2(16),XVRS),(S2(17),XVFS),(S2(18),XVRS),
(S2(19),XVFS),(S2(20),XVRS),(S2(21),XVFS),(S2(22),XVFS),(S2(23),XVRS)
EQUIVALENCE (ND(181),J),(ND(182),J)
EQUIVALENCE (ND(111),NC),(ND(127),IYP)

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CHART TITLE - INTRODUCTORY COMMENTS

\*\*\*\*\*  
SUBROUTINE PART 11  
\*\*\*\*\*

CHART TITLE - SUBROUTINE PART11

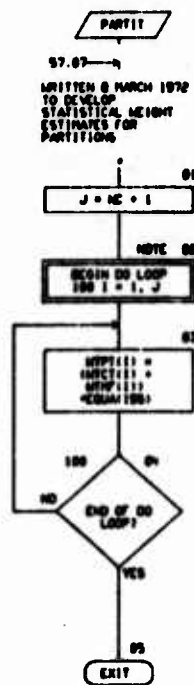


CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION MTCT(20),MTPF(20)
DIMENSION MPT(20)
DIMENSION EQUA(100)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TLM(200)),(DC(1),TCOM(101)),
(ND(1),TCOM(401))
EQUIVALENCE (D(1),EQUA(1))
EQUIVALENCE (T(101),MTCT(1)),(T(101),MTPF(1))
EQUIVALENCE (T(101),MPT(1))
EQUIVALENCE (ND(101),1)
EQUIVALENCE (ND(111),NE)
```

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AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE SECOST  
#####





CHART TITLE - SUBROUTINE SECOST

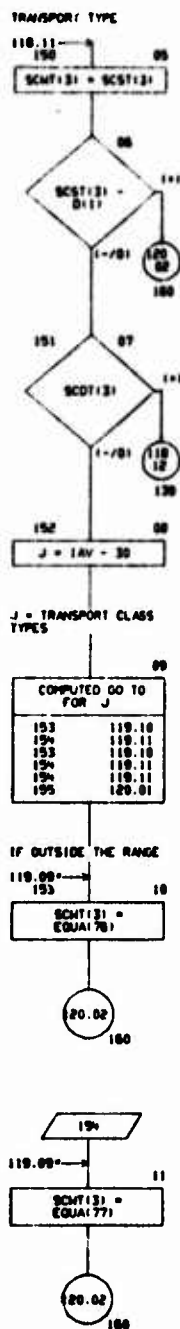
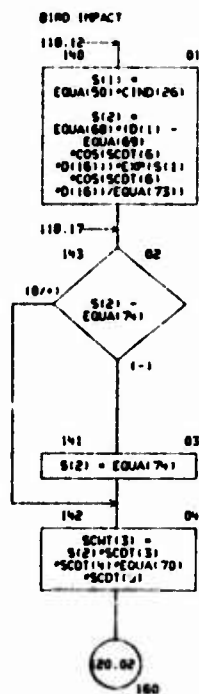


CHART TITLE - SUBROUTINE SECOST

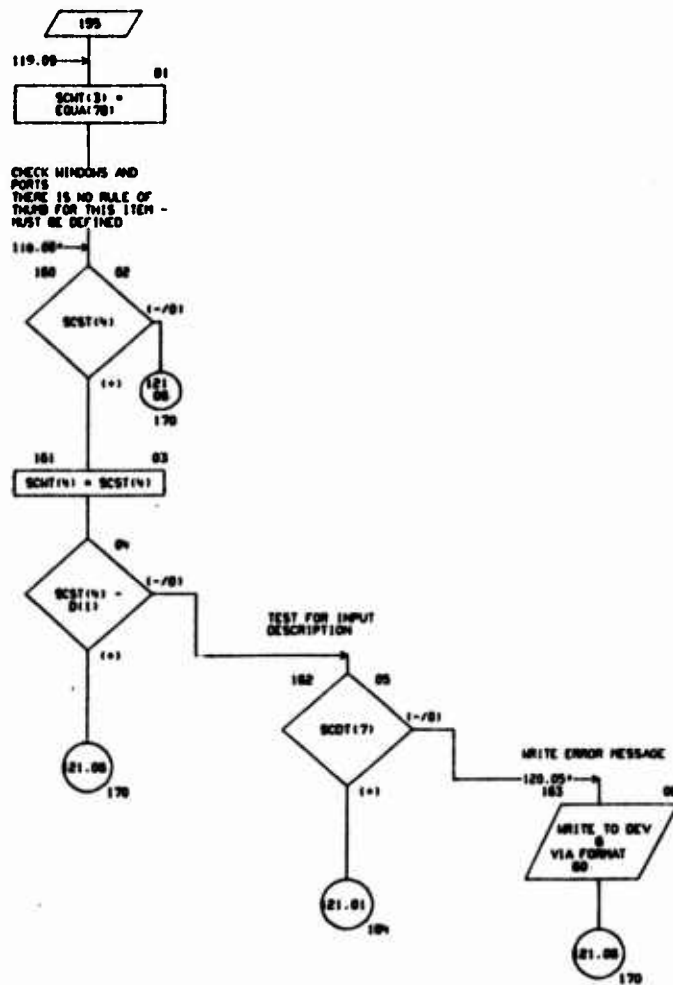




CHART TITLE - SUBROUTINE RECORD

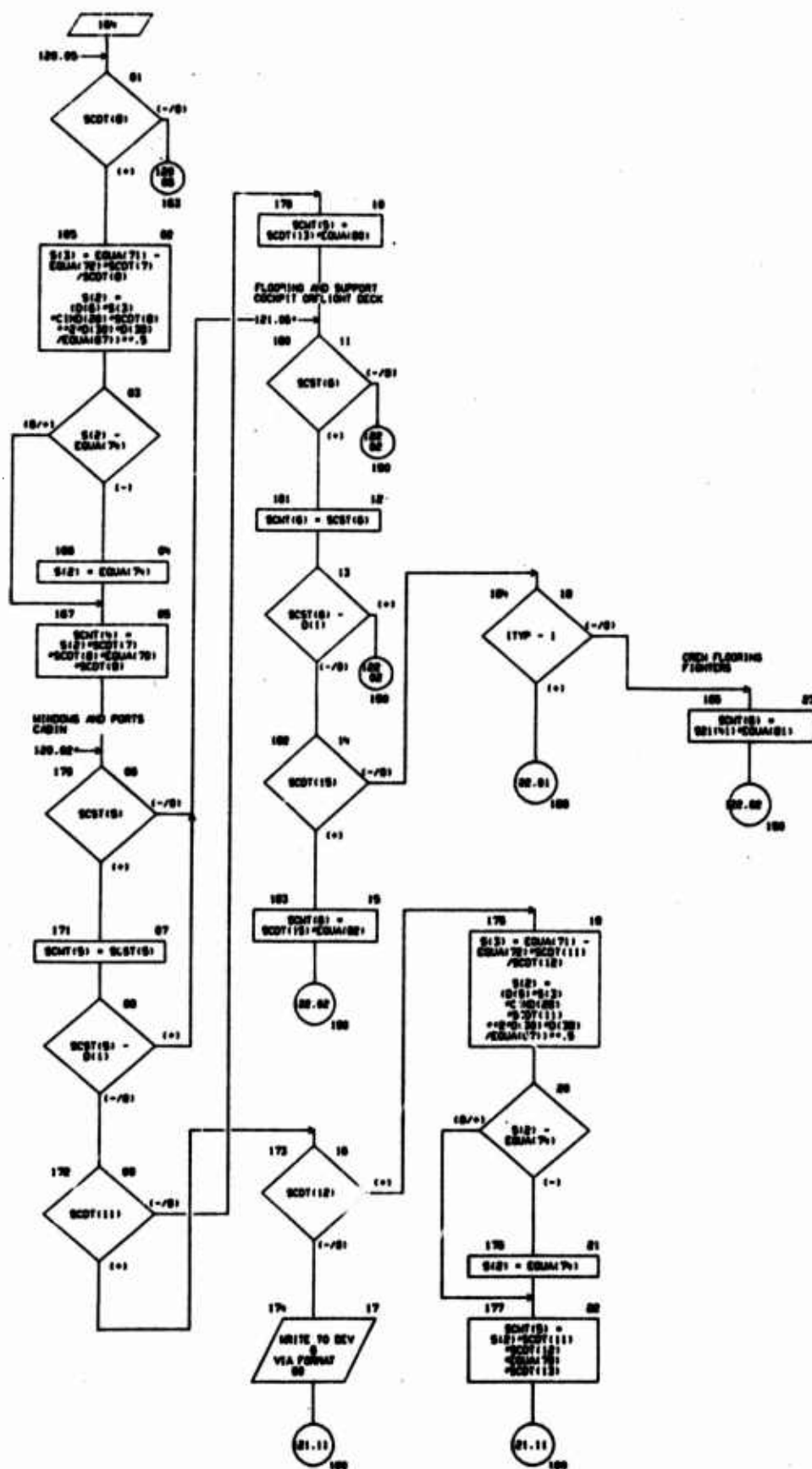


CHART TITLE - SUBROUTINE SECOST

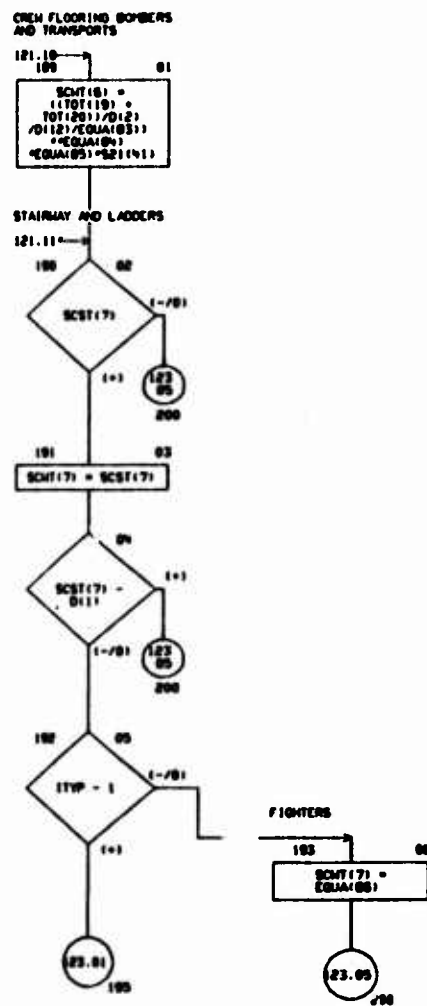


CHART TITLE - SUBROUTINE SECOST

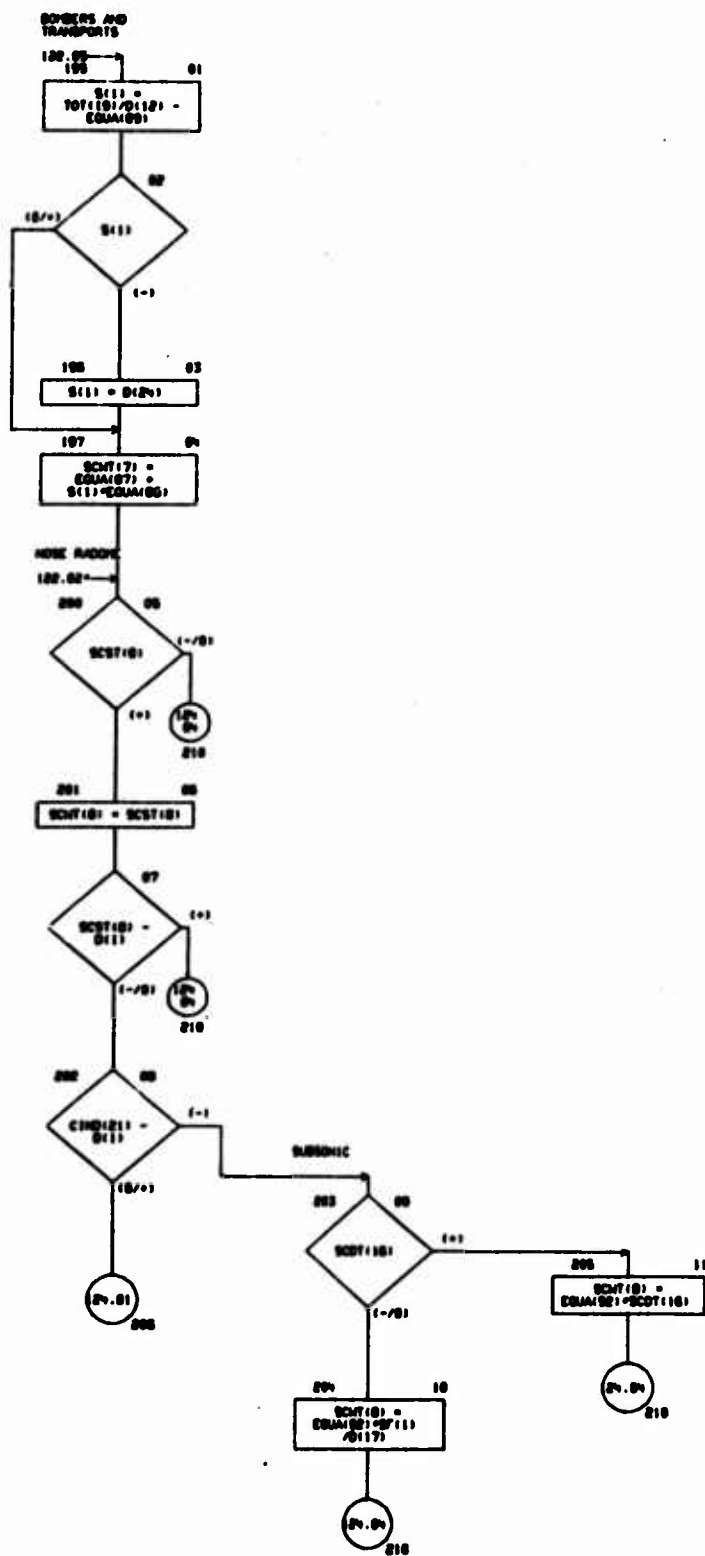


CHART TITLE - SUBROUTINE RECDST

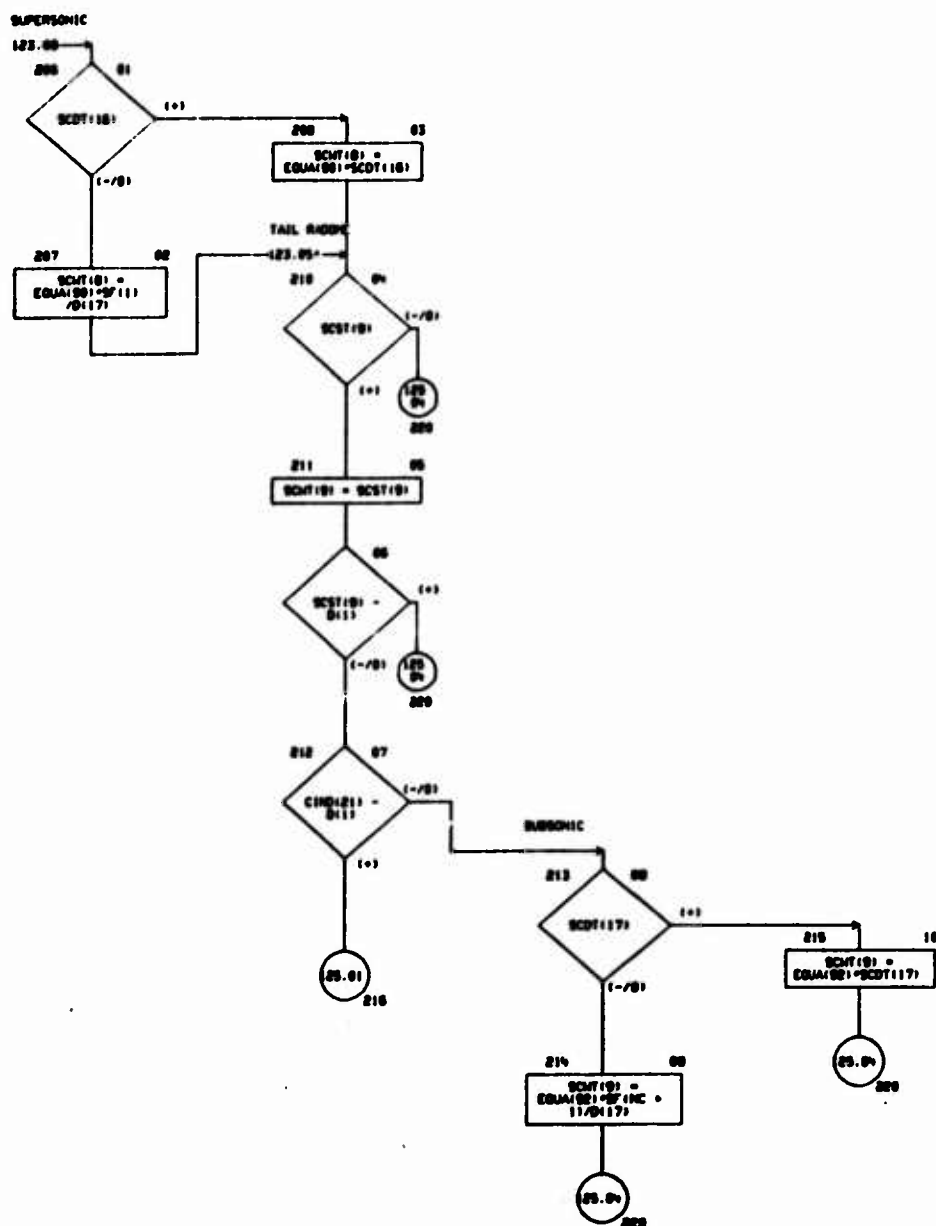








CHART TITLE - SUBROUTINE SECOST

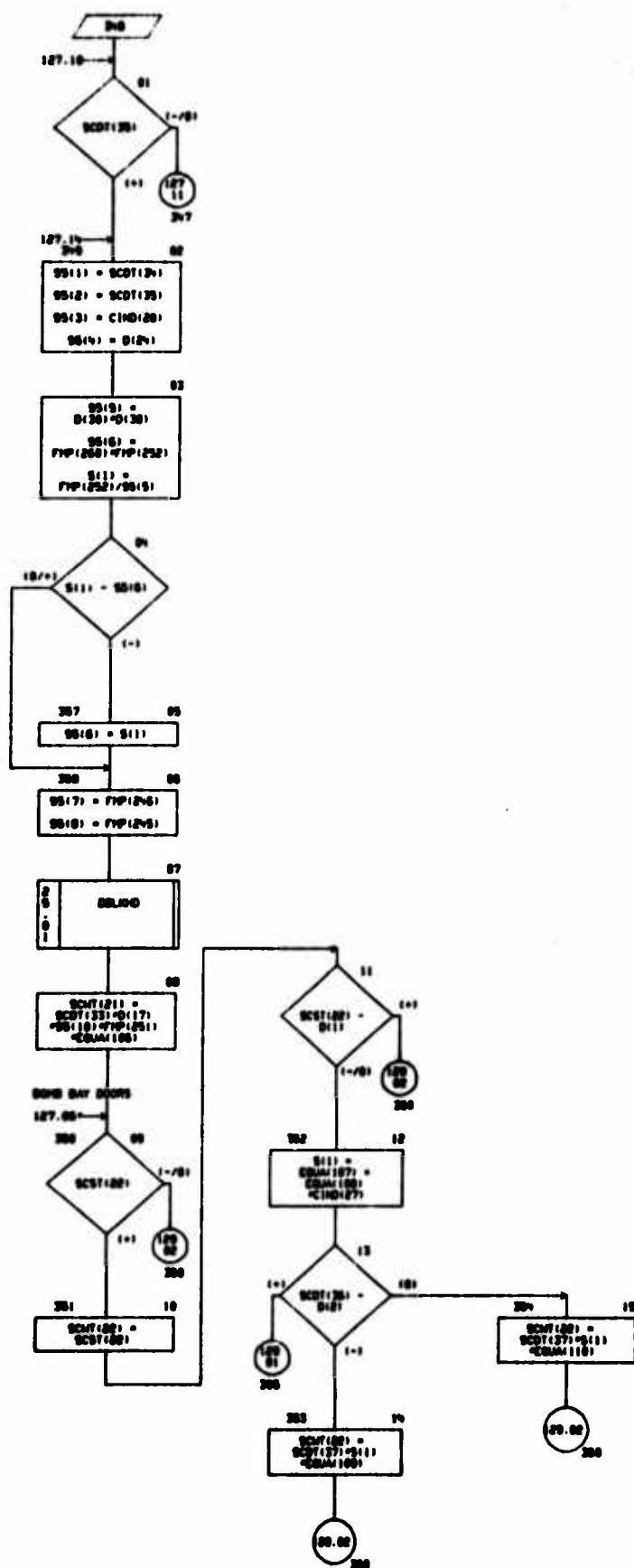






CHART TITLE - SUBROUTINE SECOST

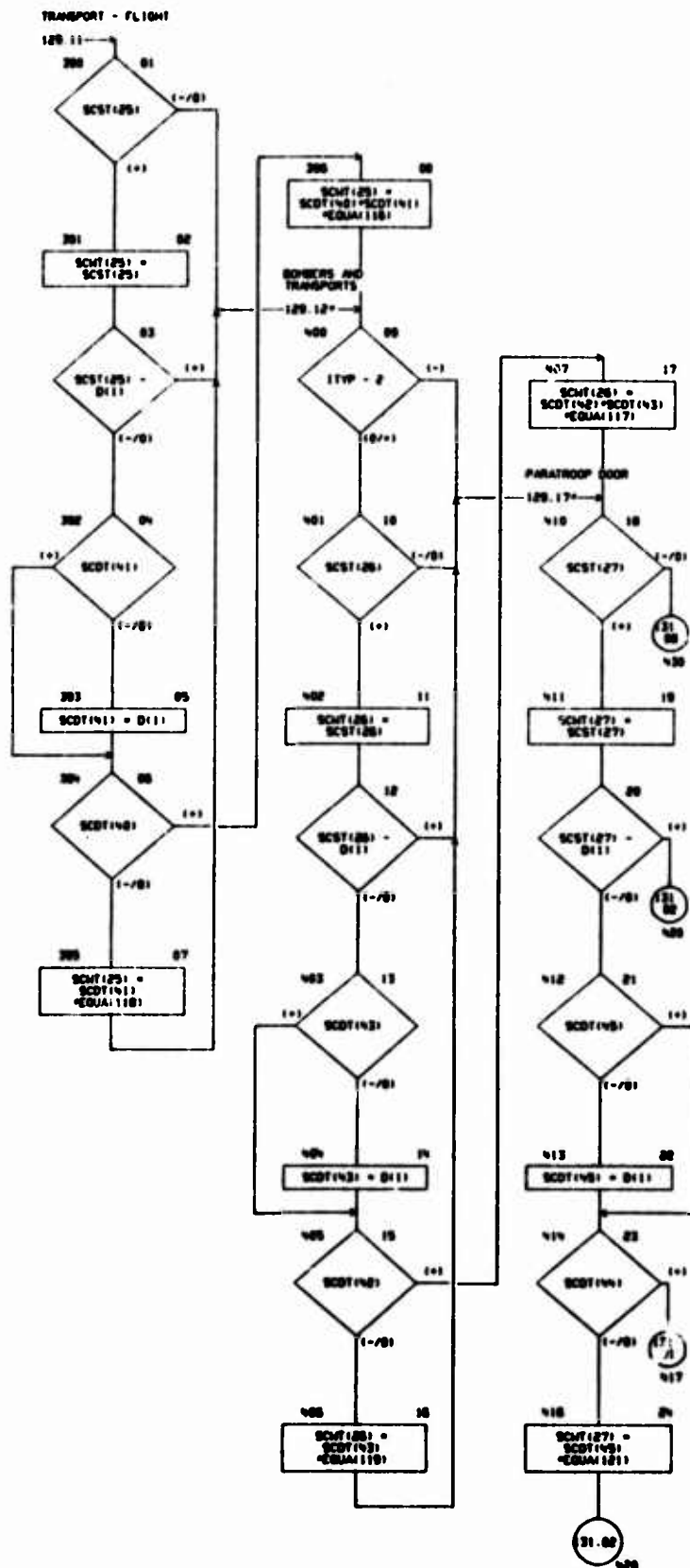
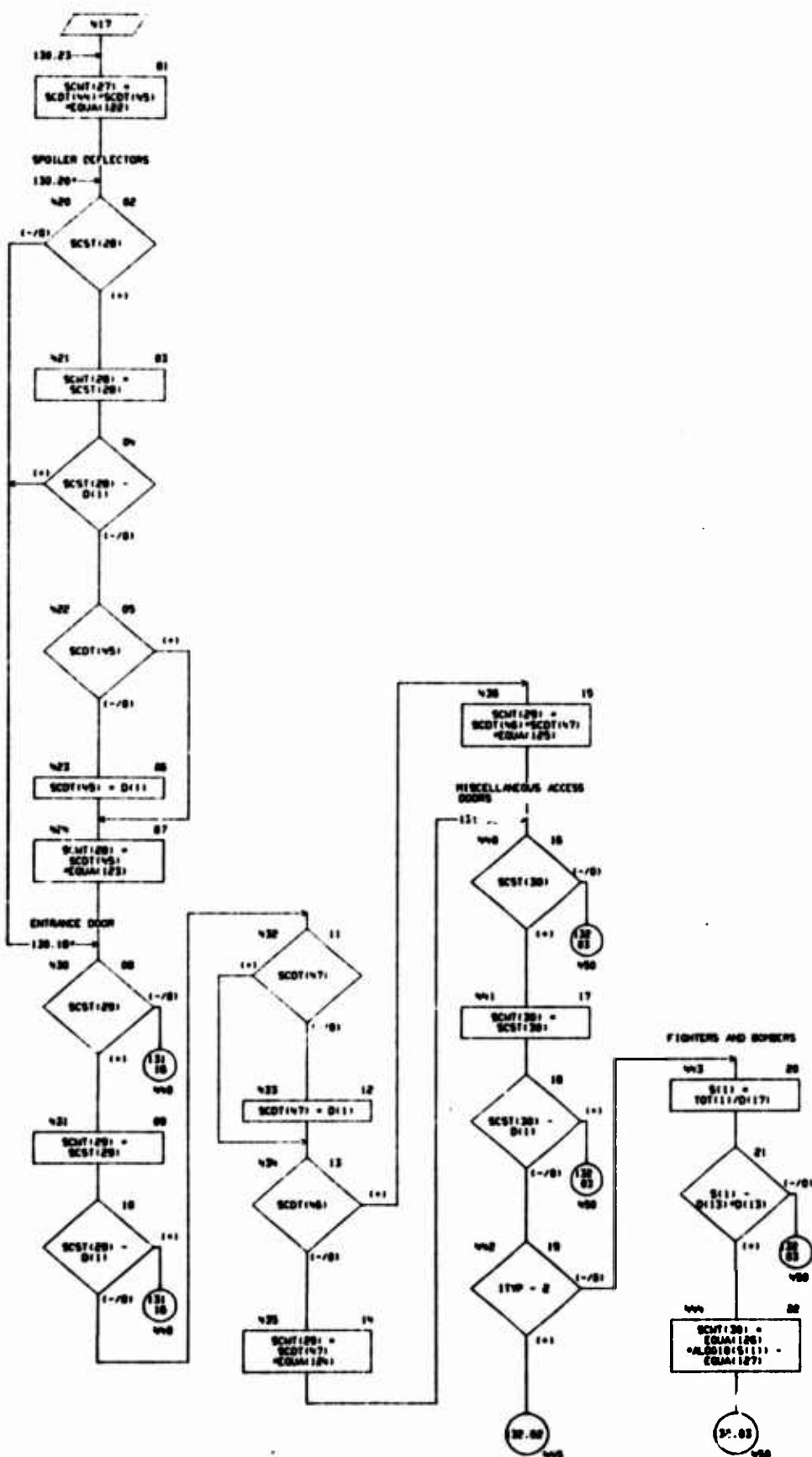


CHART TITLE - SUBROUTINE SECOST



CYAN' TITLE - SUBROUTINE SECOSI

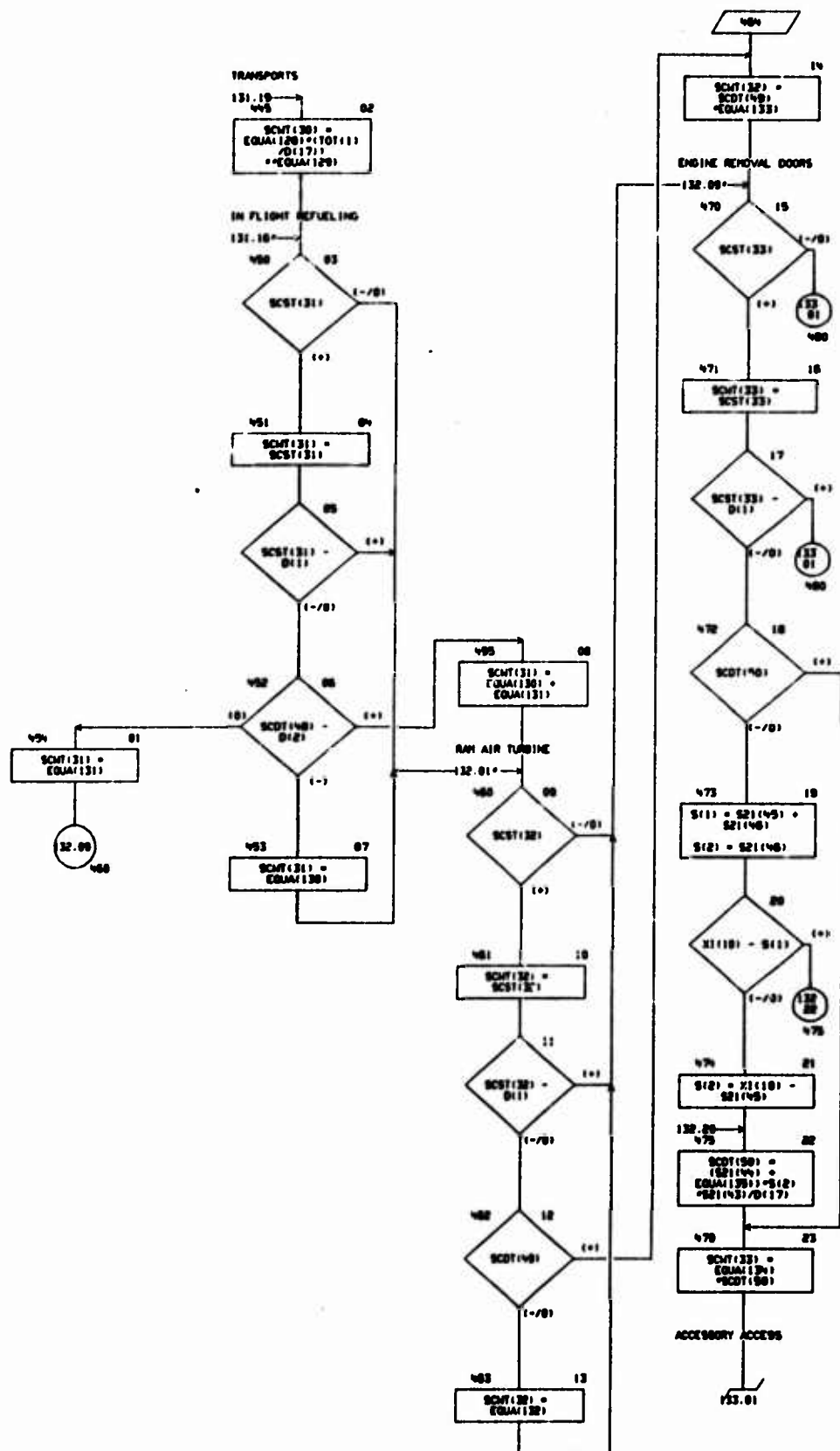
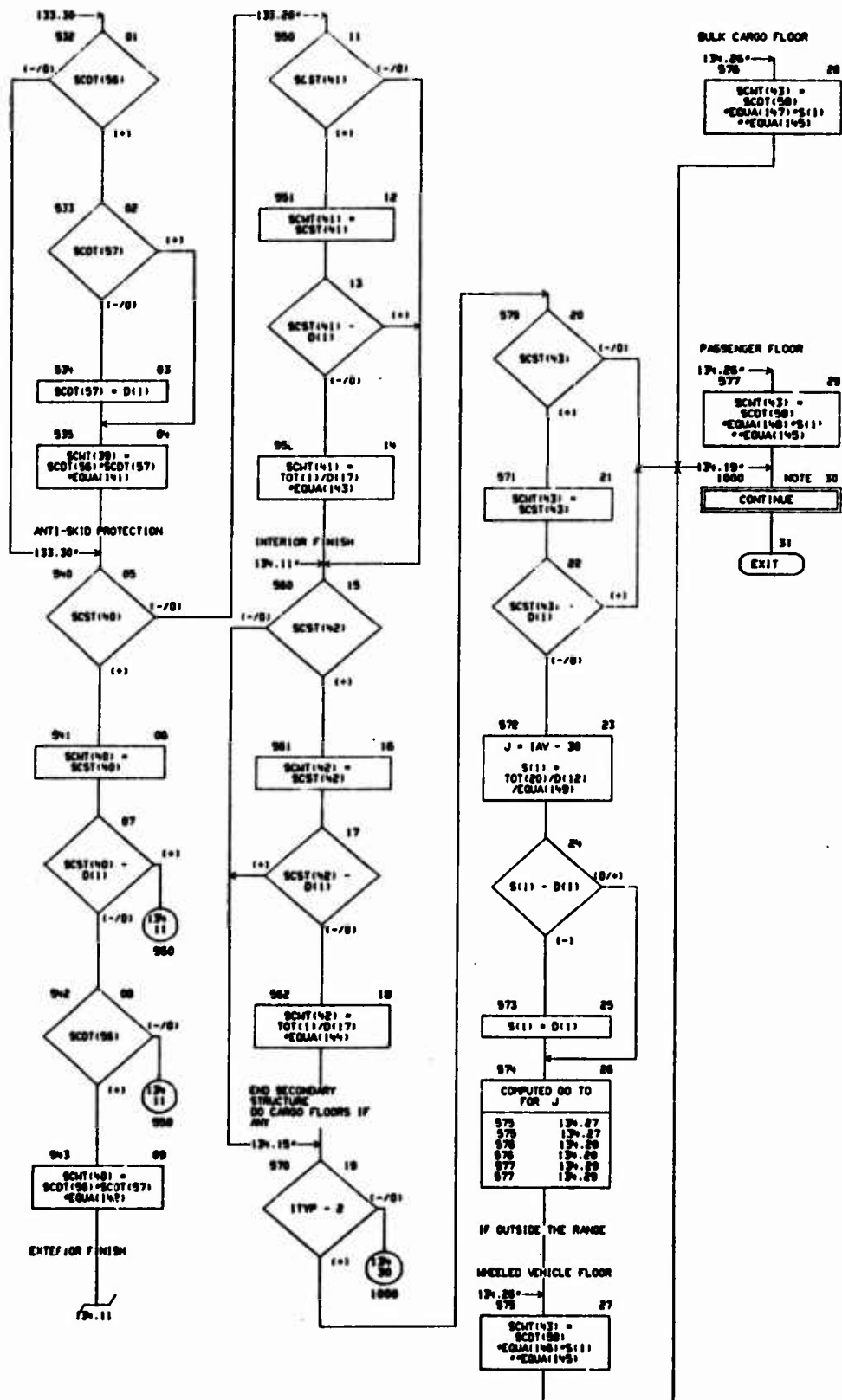




CHART TITLE - SUBROUTINE SECOST



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(400)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION EQ(4100),C(ND(50))
DIMENSION XI(10)
DIMENSION S(100),SCD(100)
DIMENSION S2(100)
DIMENSION S(100),S5(20),TOT(20),SF(20)
DIMENSION FHP(300)
DIMENSION SCHT(50)
EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(2001)),(DC(1),TCOM(101)),
(ND(1),TCOM(401))
EQUIVALENCE (D(81),EQ(41)),(D(24),C(ND(1)))
EQUIVALENCE (D(24),XI(1))
EQUIVALENCE (D(82),SCS(1)),(D(22),SCD(1))
EQUIVALENCE (D(100),S2(1))
EQUIVALENCE (T(1),S(1)),(T(12),S5(1)),(T(20),TOT(1)),
(T(40),SF(1))
EQUIVALENCE (T(120),FHP(1))
EQUIVALENCE (T(195),SCHT(1))
EQUIVALENCE (ND(102),J)
EQUIVALENCE (ND(11),NC), (ND(117),IAV), (ND(127),ITYP)
80 FORMAT(1H1,20X,23H*** WARNING MESSAGE ***10X,
61HWINDOWS AND PORTS RULE OF THUMB IS NOT WITHIN PROGRAM CAPACITY)

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04/10/74

AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE SPRINT  
#####



CHART TITLE - SUBROUTINE SPRINT

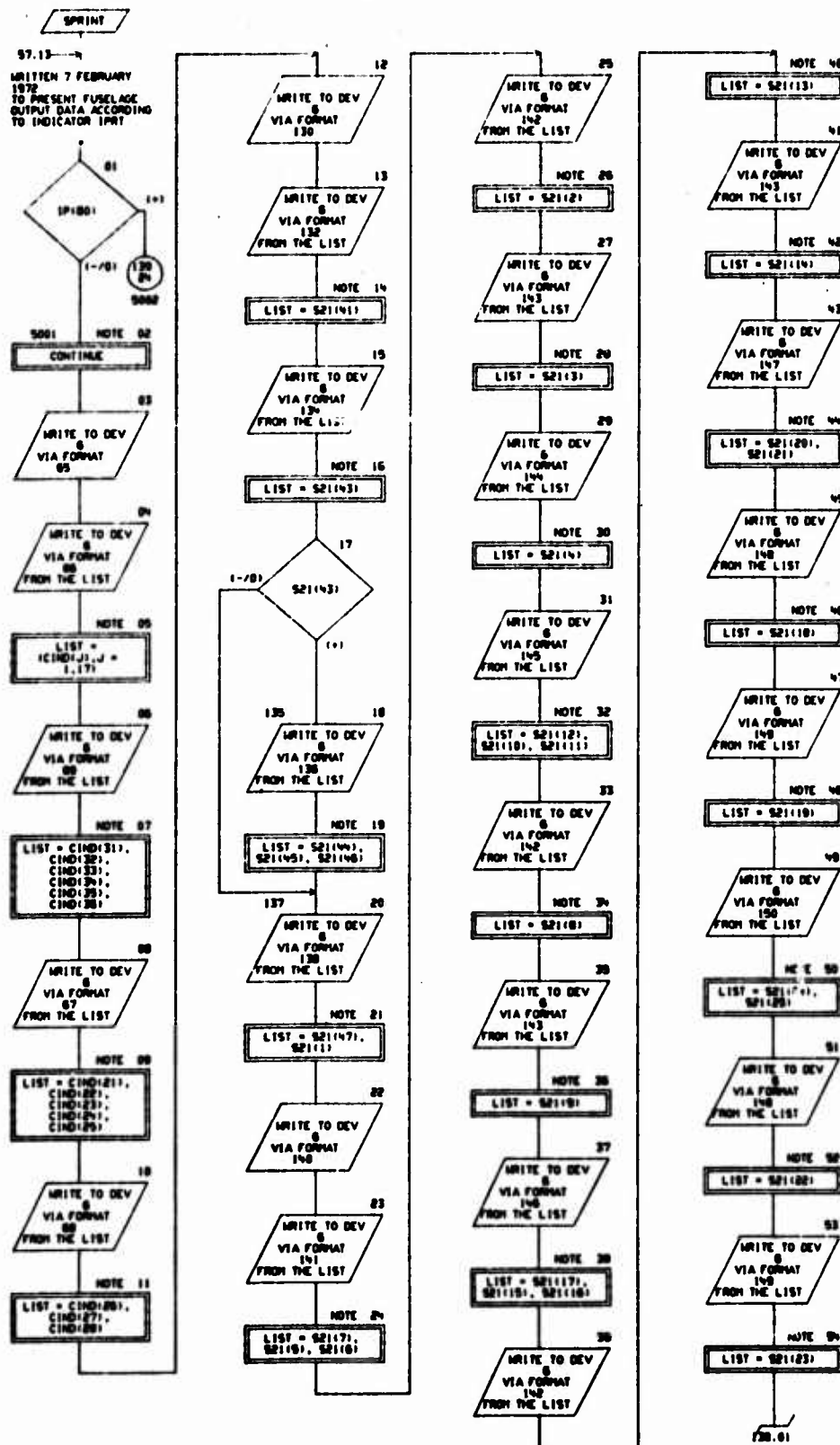


CHART TITLE - SUBROUTINE SPRINT

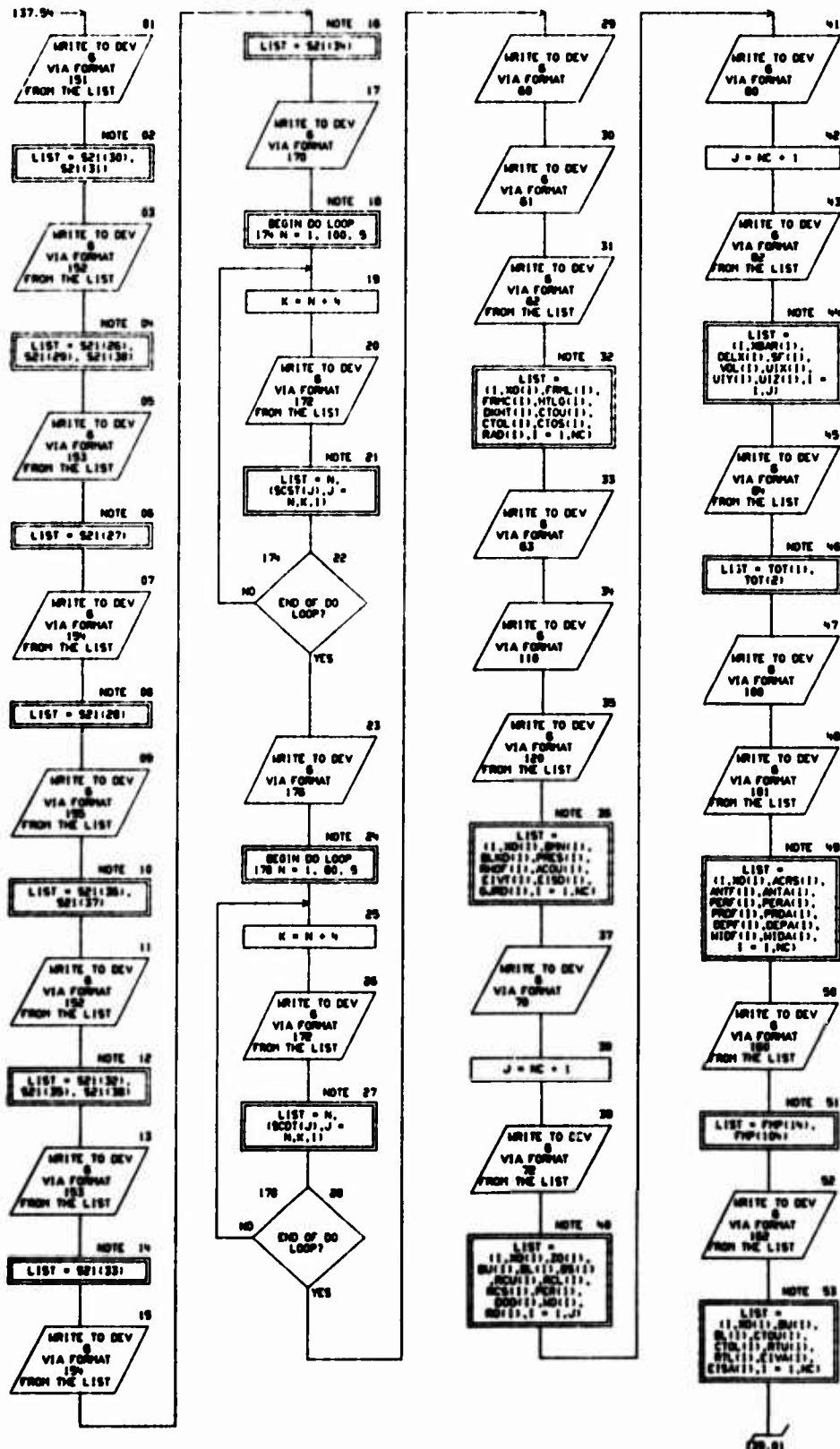


CHART TITLE - SUBROUTINE SPRINT

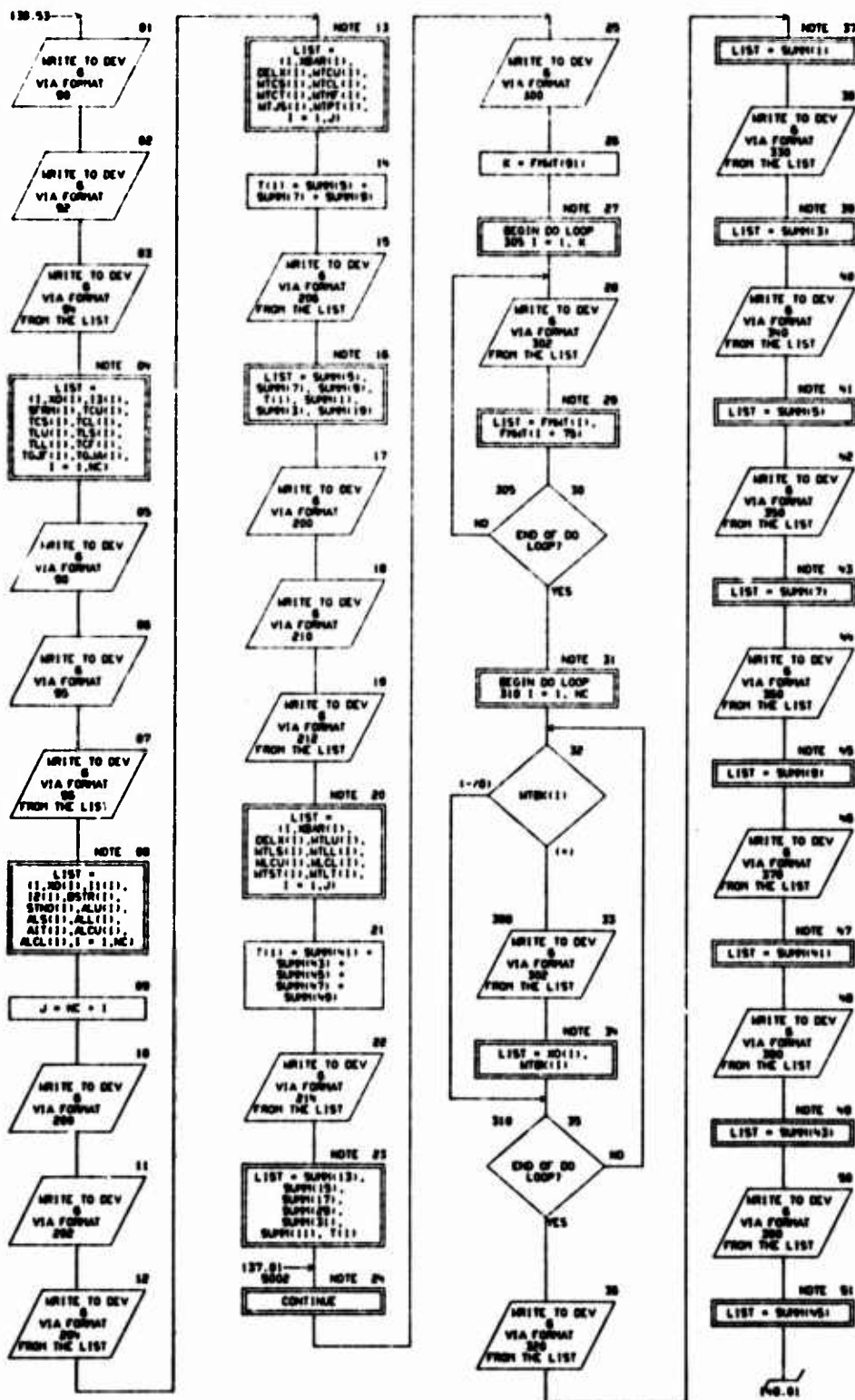


CHART TITLE - SUBROUTINE SPRINT

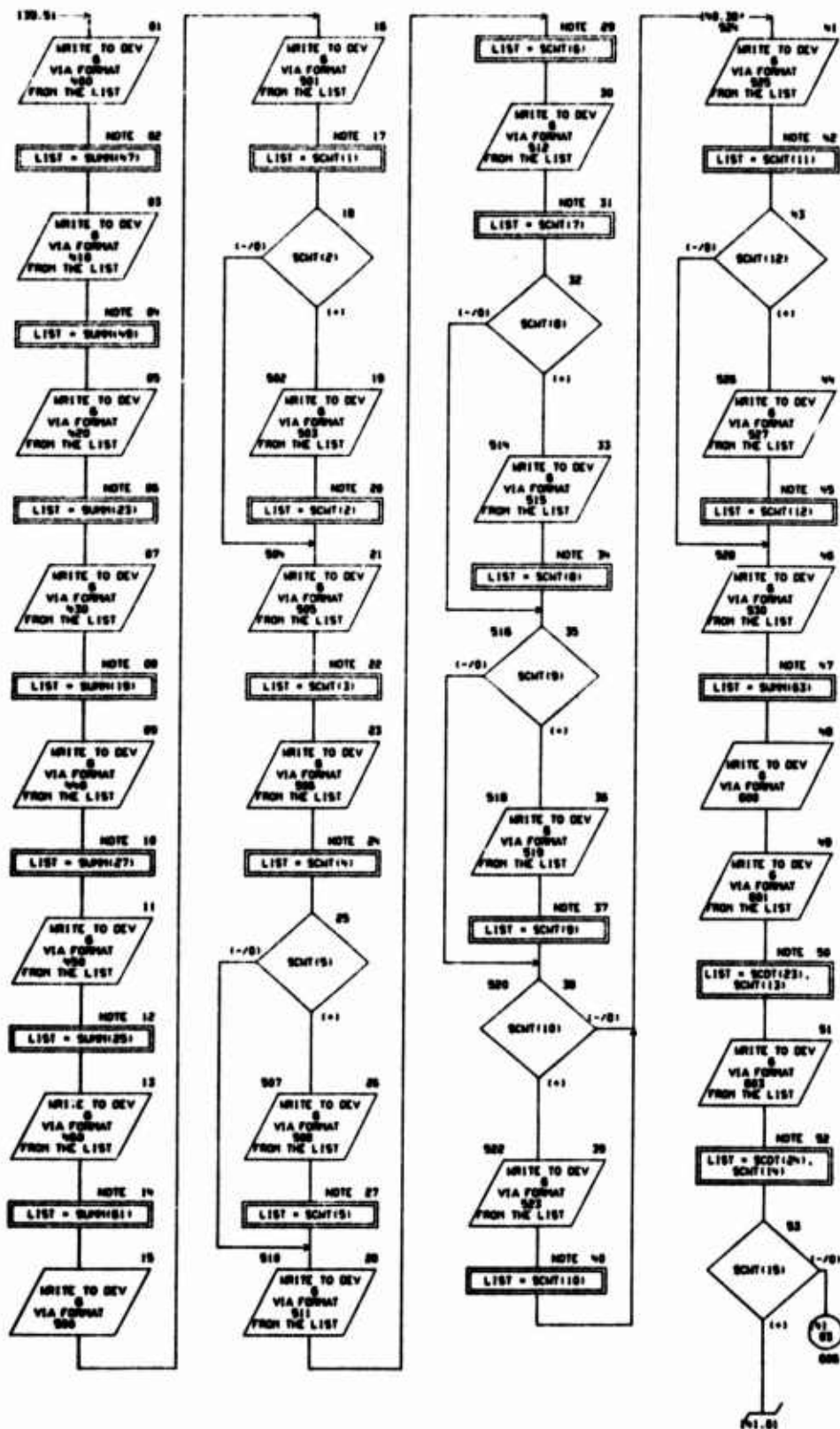


CHART TITLE - SUBROUTINE SPRINT

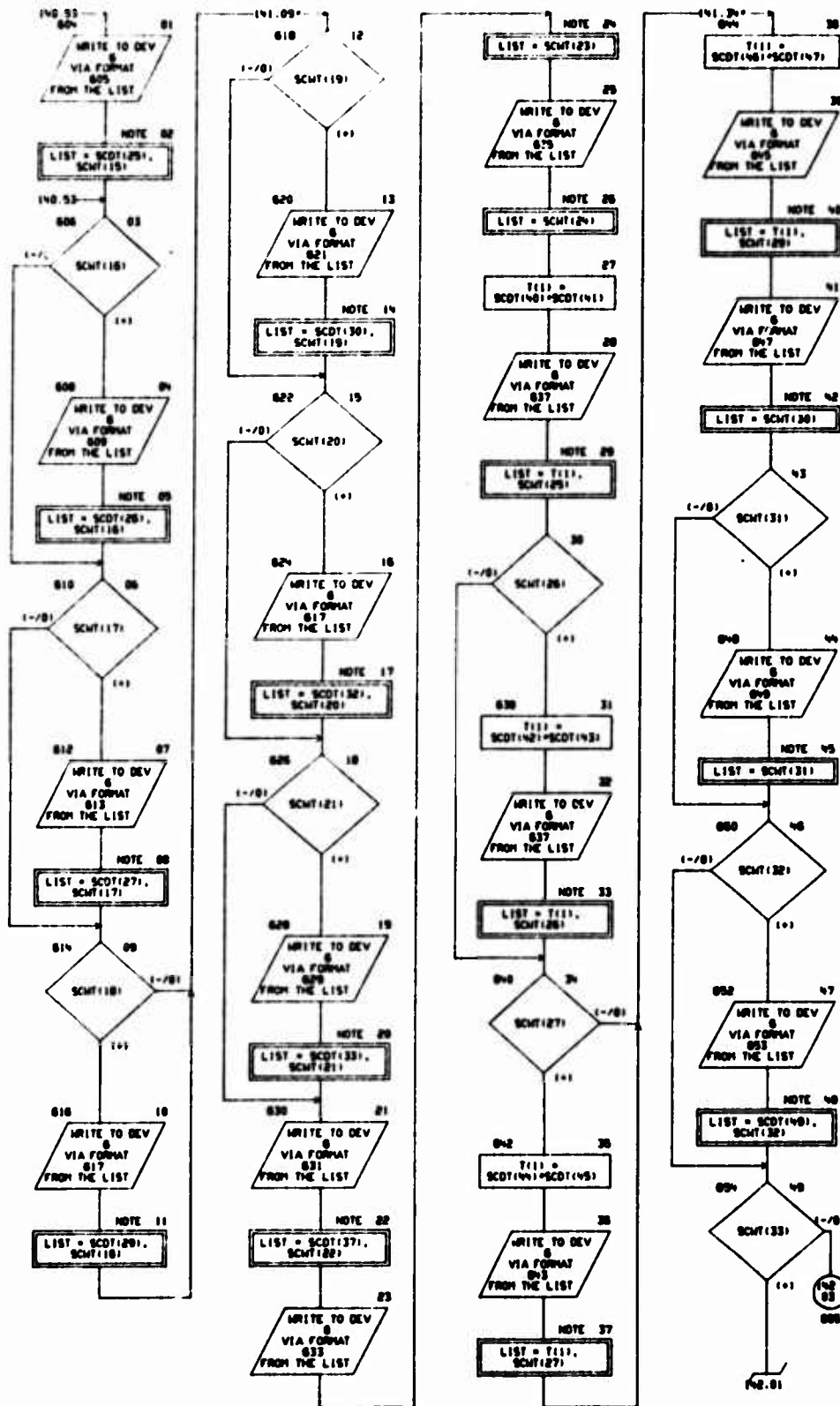
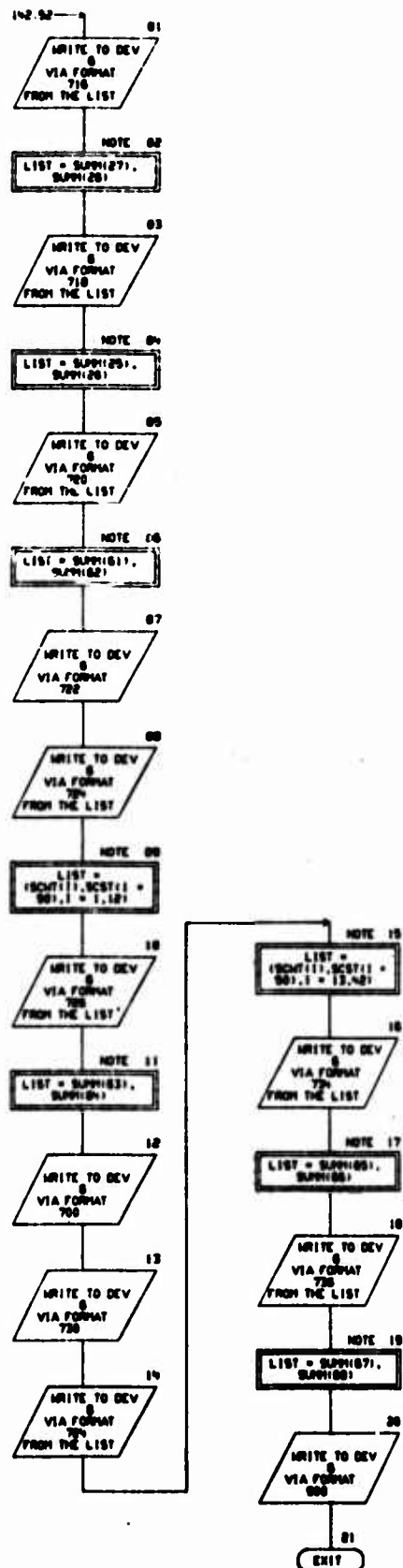




CHART TITLE - SUBROUTINE SPRINT



## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCON(400)
COMMON /IPRINT/IP(00)
DIMENSION D(2000),T(2000),DC(100),ND(200)
DIMENSION CIND(50)
DIMENSION MD(20),FRPL(20),FRPC(20),MTL0(20),DMNT(20),CTOU(20),
CTL(20),CTOS(20),RAD(20)
DIMENSION BPH(20),BLKD(20)
DIMENSION PRES(20),RHSF(20),ACQU(20)
DIMENSION CIVT(20),EISD(20),GJRD(20)
DIMENSION SCST(100),SCDT(00)
DIMENSION SZ(100)
DIMENSION RTU(20),RTL(20),E1VA(20),E1SA(20),ALCU(20),ALCL(20),
ALCU(20),ALCL(20)
DIMENSION TOT(20)
DIMENSION ACRS(20),ANTF(20),ANTA(20),PERF(20),PERA(20),PROF(20),
PRDA(20)
DIMENSION DEPF(20),DEPA(20),MIDF(20),MIDA(20)
DIMENSION FWT(01)
DIMENSION ZD(20),ZCU(20),RCL(20),RCS(20),BU(20),BL(20),BS(20),
HBA(20),DELX(20),ZF(20),VOL(20),DOO(20),MD(20),RD(20),PER(20),
UIX(20),UIY(20),UIZ(20)
DIMENSION TCU(20),TCS(20),TCL(20),TLU(20),TLS(20),TLL(20),
TCF(20),TOJF(20),TOLJA(20),ALU(20),ALL(20),ALS(20),AIT(20),
STRM(20),STND(20),BSTR(20)
DIMENSION FWP(200)
DIMENSION MTCU(20),MTC5(20),MTC(20),MCT(20)
DIMENSION MTLU(20),MTLS(20),MTLL(20),MTST(20),MTLT(20)
DIMENSION MTHV(20),MTJS(20)
DIMENSION MTK(20),MTP(20)
DIMENSION SUPP(00)
DIMENSION SCHT(50)
DIMENSION I1(20),I2(20),I3(20)
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(2001)),(DC(1),TCON(401)),
(ND(1),TCON(401))
EQUIVALENCE (D(24),CIND(1))
EQUIVALENCE (D(30),MD(1))
EQUIVALENCE (D(30),FRPL(1)),(D(40),FRPC(1))
EQUIVALENCE (D(42),MTL0(1)),(D(44),DMNT(1))
EQUIVALENCE (D(46),CTOU(1)),(D(48),CTL(1)),(D(50),CTOS(1))
EQUIVALENCE (D(52),RAD(1))
EQUIVALENCE (D(54),BPH(1)),(D(56),BLKD(1))
EQUIVALENCE (D(60),PRES(1)),(D(62),RHSF(1)),(D(64),ACQU(1))
EQUIVALENCE (D(66),CIVT(1)),(D(68),EISD(1)),(D(70),GJRD(1))
EQUIVALENCE (D(82),SCST(1)),(D(84),SCDT(1))
EQUIVALENCE (D(100),SZ(1))
EQUIVALENCE (D(110),ACRS(1)),(D(112),ANTF(1)),
(D(114),ANTA(1)),(D(116),PERF(1)),(D(118),PERA(1)),
(D(120),PROF(1)),(D(122),PRDA(1))
EQUIVALENCE (D(124),DEPF(1)),(D(126),DEPA(1)),
(D(128),MIDF(1)),(D(130),MIDA(1))
EQUIVALENCE (D(150),RTU(1)),(D(153),RTL(1)),
(D(155),E1VA(1)),(D(157),E1SA(1)),
(D(159),ALCU(1)),(D(161),ALCL(1)),
(D(163),ALCU(1)),(D(165),ALCL(1))
EQUIVALENCE (D(180),FWT(1))
EQUIVALENCE (T(20),TOT(1))
EQUIVALENCE (T(20),ZD(1)),(T(24),ZCU(1)),(T(26),RCL(1)),
(T(30),RCS(1)),(T(32),BU(1)),(T(34),BL(1)),(T(36),BS(1)),
(T(38),HBA(1)),(T(40),DELX(1)),(T(42),ZF(1)),
(T(44),VOL(1)),(T(46),DOO(1)),(T(48),MD(1)),(T(50),RD(1)),
(T(54),PER(1)),(T(56),UIX(1)),(T(58),UIY(1)),(T(60),UIZ(1))
EQUIVALENCE (T(62),TCU(1)),(T(64),TCS(1)),(T(66),TCL(1)),
(T(68),TLU(1)),(T(70),TLS(1)),(T(72),TLL(1)),

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## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

(1741),TCF(1), (1751),TCU(1), (1761),TOJAI(1),
(1801),ALU(1), (1821),ALL(1), (1841),ALS(1),
(1861),AIT(1), (1881),SFRM(1), (1901),STND(1),
(1921),BSTR(1)
EQUIVALENCE (11201),FMP(1)
EQUIVALENCE (11501),MTCU(1), (11521),MTCB(1),
(11541),MTCI(1), (11561),MTCY(1)
EQUIVALENCE (11581),MTLU(1), (11601),MTLS(1),
(11621),MTLL(1), (11641),MTST(1), (11661),MTLT(1)
EQUIVALENCE (11681),MTHF(1), (11701),MTJS(1)
EQUIVALENCE (11831),MTBK(1), (11851),MTPF(1)
EQUIVALENCE (11951),SCHT(1)
EQUIVALENCE (1204001),SUPP(1)
EQUIVALENCE (ND150),NPAGE)
EQUIVALENCE (ND101),I), (ND102),J), (ND111),NC)
EQUIVALENCE (ND103),K), (ND106),N)
EQUIVALENCE (ND113),I1(1), (ND1161),I2(1), (ND1181),I3(1)
05 FORMAT(1H,35X,3BH*** GENERAL CONSTRUCTION INDICATORS ***.14X,
      21H** SPRINT - (P100) **)
06 FORMAT(1H0/.20X,12HVEHICLE TYPE.10X.FB.1/20X,
      14HNUMBER OF CUTS.10X.FB.1/20X,
      10HSHAPE CODE.20X.FB.1/20X,
      17HCONSTRUCTION TYPE.13X.FB.1/20X,
      20HCOVER DESIGN INDICATOR.0X.FB.1/20X,
      21HCOVER MATERIAL NUMBER.0X.FB.1/20X,
      24HLONGERON MATERIAL NUMBER.0X.FB.1/20X,
      27HMAJOR FRAME MATERIAL NUMBER.3X.FB.1/20X,
      27HMINOR FRAME MATERIAL NUMBER.3X.FB.1/20X,
      10HPRINT CODE.20X.FB.1/20X,
      27HNUMBER OF PRIMARY LONGERONS.3X.FB.1/20X,
      27HNUMBER OF SECONDARY LONGERONS.1X.FB.1/20X,
      27HGENERAL DEPTH RATIO - LONDS.3X.FB.1/20X,
      20HNUMBER OF SHJJD RADII.0X.FB.1/20X,
      10HSTRINGER SPACING.14X.FB.1/20X,
      10HGENERAL FRAME DEPTH.11X.FB.1/20X,
      21HGENERAL FRAME SPACING.0X.FB.1)
08 FORMAT(20X,10HCOVER INDEX FACTOR.12X.F12.4/20X,
      21HLONGERON INDEX FACTOR.0X.F12.4/20X,
      10HJF INDEX FACTOR.14X.F12.4/20X,
      27HMINOR FRAME INDEX FACTOR.0X.F12.4/20X,
      27HMAJOR FRAME INDEX FACTOR.0X.F12.4/20X,
      21HRAILHEAD INDEX FACTOR.0X.F12.4)
07 FORMAT(20X,24HLOCAL PANEL FLUTTER DATA/20X,
      11HMAX NUMBER.10X.F10.2/20X,
      04H1TITUDE.02X.FB.1/20X,
      10HDYNAMIC PRESSURE.14X.FB.1/20X,
      27HCOVER MODULUS OF ELASTICITY.7X.F12.4/20X,
      27HFUNCTION OF MAX NUMBER.0X.F11.4)
08 FORMAT(20X,27HADDITIONAL DESIGN DATA/20X,
      27HMAXIMUM SEA LEVEL SPEED.7X.F10.2/20X,
      27HMAXIMUM DYNAMIC PRESSURE.0X.FB.1/20X,
      20HLIMIT CABIN PRESSURE.10X.F10.2)
130 FORMAT(1H1,40X,20H*** BASIC VEHICLE DATA ***.22X,
      21H** SPRINT - (P100) **)
132 FORMAT(1//20X,20HNUMBER OF CREW MEMBERS.0X.FB.1)
134 FORMAT(20X,17HNUMBER OF ENGINES.13X.FB.1)
136 FORMAT(20X,15HENGINE DIAMETER.15X.FB.1/20X,
      17HENGINE FRONT FACE.13X.FB.1/20X,
      13HENGINE LENGTH.17X.FB.1)
138 FORMAT(20X,27HWING CHORD - SIDE OF FUSELAGE.F10.1/20X,
      04H1NG APEX.21X.FB.1)
140 FORMAT(1//35X,04H1 DICATOR.3X,12H1-COORDINATE.3X,10H1-SIDE FUS,
      3X,10H2-SIDE FUS)

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## CHART TITLE - NON-PROCEDURAL STATEMENTS

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141 FORMAT (15X,SHING DATA,10X,F7.1,10X,F9.1,4X,F9.1)
142 FORMAT (10X,10HFRONT SPAR,10X,F9.1)
143 FORMAT (10X,10HREAR SPAR,10X,F9.1)
144 FORMAT (10X,10HINT. SPAR,10X,F9.1)
145 FORMAT (15X,20HORIZONTAIL TAIL DATA,F9.1,10X,F9.1,4X,F9.1)
146 FORMAT (15X,10HVERTICAL TAIL DATA,F9.1,10X,F9.1,4X,F9.1)
147 FORMAT (15X,10HACELLE DATA,33X,F9.1,4X,F9.1)
148 FORMAT (10X,15HFORWARD SUPPORT,13X,F9.1)
149 FORMAT (10X,11HHAFT SUPPORT,17X,F9.1)
150 FORMAT (15X,17HSTORES AND OTHERS,20X,F9.1,4X,F9.1)
151 FORMAT (15X,14HROSE GEAR DATA,31X,F9.1,4X,F9.1)
152 FORMAT (10X,15HROUND LOCATION,13X,F9.1,5X,F9.1,4X,F9.1)
153 FORMAT (10X,10HROUND,20X,F9.1)
154 FORMAT (10X,10HROG STRUT,10X,F9.1)
155 FORMAT (15X,14HMAIN GEAR DATA,31X,F9.1,4X,F9.1)
170 FORMAT(1H1,32X,4H*** SECONDARY STRUCTURE - INPUT DATA SET ***,
      12X,21H** SPRINT - (P100) **
      //20X,37HINDICATORS AND C.G. DATA, SCST REGION)
172 FORMAT(4X,13,5F10.4)
176 FORMAT(//20X,3HGEOMETRIC DEFINITIONS, SCOT REGION)
80 FORMAT(1H1,3X,35H*** SHELL GEOMETRY - INPUT DATA SET ***,15X,
      21H** SPRINT - (P100) **)
81 FORMAT(10X,20HFRAME,4X,5HFRAME,4X,10HLONGERON,4X,4HDOCK,7X,
      5HCUTOUT,4X,5HCUTOUT,4X,5HCUTOUT,4X,5HSHROUD/5X,5HCUT,4X,
      7HSTATION,4X,7HPACING,3X,5HDEPTH,3X,11HDEPTH RATIO,2X,5HDEPTH,
      5X,5HUPPER,5X,5HLOWER,5X,4HSIDE,5X,5HRADIUS)
82 FORMAT(7X,13,2F11.1,F9.1,2F11.4,4F10.1)
83 FORMAT(10X,6HNOTES,710X,31HFRAME SPACING = 1000 INDICATES ,
      20HFIXED FRAME SPACING,710X,20HNEGATIVE VALUE FOR LONGERON ,
      23HDEPTH INDICATES ANGULAR/10X,20HLOCATION OF LONGERONS ,
      11HIN RADIANS,710X,37HVALUE OF 1 DESIGNATES THE REMOVAL OF ,
      7HSECTOR,710X,30HNEGATIVE VALUE FOR CUTOUTS AND SHROUD ,
      31HRADIUS DESIGNATES FORWARD EDGE.)
110 FORMAT(1H1,87X,35H*** SHELL CRITERIA AND INDICATORS - ,
      10HINPUT DATA SET ***,7X,21H** SPRINT - (P100) ****21X,
      6HNUMBER,2X,5HINDICATOR,12X,7HSENSITIVITY,2X,5HACOUSTIC,5X,
      22HSTIFFNESS REQUIREMENTS/5X,5HCUT,2X,7HSTATION,3X,5HOCAMS,3X,
      5HSHLHEAD,3X,5HPRESSURE,3X,4HVEL,4X,5HLEVEL-DB,5X,
      7H1-VERT,5X,7H1-SIDE,5X,2H0J)
120 FORMAT(10,F9.1,F9.1,F10.1,F12.1,F9.4,F10.1,3F13.1)
70 FORMAT(1H1,35X,37H*** SHELL GEOMETRY - SECTION DATA ***,
      16X,21H** SPRINT - (P100) ****
      5X,5HCUT,3X,4HSTA, 5X,5H20,5X,5H0J,5X,5HBL,5X,2H0S,
      5X,5HRCU,5X,5HCL,5X,5HCS,4X,5HPERI, 5X,2H00,5X,2H40,5X,2H80)
72 FORMAT(17,12F8.1)
80 FORMAT(1H1,30X,45H*** SEGMENT DATA - GEOMETRY AND UNIT INERTIAS ,
      3H***, 5X,21H** SPRINT - (P100) ****
      5X,5HSEC,5X,4HIDAR,5X,4HDEL,5X,4HAREA,7X,
      5HOLUME,7X,4HIOX,7X,4HIOY,7X,4HIOZZ)
82 FORMAT(17,2F10.1,2F12.1,3F11.1)
84 FORMAT(10X,5HTOTAL,12X,2F12.1)
180 FORMAT(1H1,35X,37H*** SHELL GEOMETRY - SECTION DATA ***,16X,
      21H** SPRINT - (P100) ****
      17X,25HCROSS SECTION AREA-TORQUE,3X,
      5HPERIMETER,5X,14HPERIMETER-DECK,2X,13HDEPTH-EFFECT,3X,
      13HWIDTH-EFFECT,7X,5HCUT,1X,7HSTATION,2X,5HTOTAL,2X,7HNET FWD,
      2X,7HNET AFT,3X,7HFORWARD,2X,5HHAFT,4X,7HFORWARD,3X,5HHAFT,2X,
      7HFORWARD,4X,5HHAFT,2X,7HFORWARD,4X,5HHAFT)
181 FORMAT(17,F9.1,3F9.1,8F8.1)
188 FORMAT(1H1,20X,35H*** MISCELLANEOUS SHELL DATA ***,16X,
      21H** SPRINT - (P100) ****
      35X,25HYOUNG'S MODULUS - COVER,4X,12.1/52X,
      5HLONGERONS,12.1//24X,10HPANEL SIZE,5X,11HCUTOUT DATA,7X,

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## CHART TITLE - NON-PROCEDURAL STATEMENTS

```

15SHAPPEANT CUTOUT,10X,17BENDING STIFFNESS/SH.
30CUT,3X,75STATION,4X,SHUPPER,5X,SHALOER,5X,SHAPPER,5X,
SHALOER,5X,SHAPPER,5X,SHALOER,7X,BWVERTICAL,10X,4WSIDE)
162 FORMAT(17,F10.2,B17.7)
90 FORMAT(1H,3X,3H*** SECTION DATA - SHELL ELEMENTS ***),10X,
21H** SPRINT - (P100) **
92 FORMAT(1H,17X,5HCR17,1X,5HFRAME,5X,15SHBASIC THICKNESS,5X,
17X,AND REQUIREMENTS,5X,5SHBASIC,5X,5HTORSION/5X,3HCUT,5X,STATION,
5H COND, 5H SPACING,5H UPPER,4X,4WSIDE,5X,SHALOER,3X,SHAPPER,
4X,4WSIDE,3X,SHALOER,2X,7HFLUTTER,2X,7HFORWARD,2X,5HIFT)
94 FORMAT(17,F10.1,F10.2,F10.4)
95 FORMAT(17,15X,15HVERTICAL COND,2X,15HCOND,5HSTRING,14X,
25HAREA - LOWERON/5HSTRING,5X,15HAREA - LONG C/O/5X,
3HCUT,2X,75STATION,3X,4HCOND,4X,5HAP,3X,11HDEPTH/SPACE,1X,
5HSHUPPER,4X,SHAPPER,5X,4WSIDE,5X,SHALOER,3X,10HLONG STIFF,2X,
SHUPPER,5X,SHALOER)
96 FORMAT(17,F10.1,217,F11.2,F10.1,F10.3)
200 FORMAT(1H,30X,31H*** SHELL COMPONENT HEIGHTS ***),10X,
21H** SPRINT - (P100) **
202 FORMAT(17,4X,15HCOVER ELEMENTS,13X,5HMINOR,3X,5HJOINTS,3X,
15HLONGITUDINAL/15X,5HNO,4X,5HSTA,5X,5HLENGTH,3X,SHUPPER,5X,
4WSIDE,4X,SHALOER,4X,5HTOTAL,4X,5HFRAMES,2X,7HSPICES,3X,
15HPARTITIONS)
204 FORMAT(10X,17,F10.1)
206 FORMAT(120X,5HTOTAL,10X,7,F10.1)
210 FORMAT(4X,20HLONGITUDINAL MEMBERS/70X,5HCUTOUT/15X,5HNO,4X,
5HSTA,5X,5HLENGTH,3X,SHUPPER,5X,4WSIDE,4X,SHALOER,4X,
SHUPPER,4X,SHALOER,4X,4HMSC,5X,5HTOTAL)
212 FORMAT(10X,17,F10.1)
214 FORMAT(120X,5HTOTAL,10X,7,F10.1)
300 FORMAT(1H,45X,10H*** BODY GROUP ***),3X,
10H** SPRINT ***
20X,20HULL HEADS AND FRAMES)
302 FORMAT(40X,F10.2,2X,F10.1)
320 FORMAT(120X,12HMINOR FRAMES,40X,F10.1)
330 FORMAT(120X,25HJOINTS, 5HSPICES AND FASTENERS,23X,F10.1)
340 FORMAT(120X,3HCOVERING - UPPER BETWEEN LONGERONS,10X,F10.1)
360 FORMAT(20X,5H- SIDE BETWEEN LONGERONS,10X,F10.1)
380 FORMAT(20X,3H- LOWER BETWEEN LONGERONS,10X,F10.1)
370 FORMAT(20X,4HCOVERING LONGITUDINAL STIFFENERS - UPPER BETW.,
5H LONG, F10.1)
390 FORMAT(5X,10H- SIC BETW. LONG, F11.1)
400 FORMAT(5X,10H- LOWER BETW. LONG, F10.1)
400 FORMAT(120X,17HLONGERONS - UPPER,35X,F10.1)
410 FORMAT(30X,7H- LOWER,35X,F10.1)
420 FORMAT(120X,11HENGINE BRAG,41X,F10.1)
430 FORMAT(120X,30HLONGITUDINAL PARTITIONS - (STRUCTURAL),14X,F10.1)
440 FORMAT(120X,41HFLOORING AND SUPPORTS - (BASIC STRUCTURE),11X,
F10.1)
460 FORMAT(120X,5HFITTINGS,44X,F10.1)
460 FORMAT(120X,25HTOTAL - BASIC STRUCTURE,30X,F10.1)
500 FORMAT(1H,4X,10H*** BODY GROUP ***),3X,10H** SPRINT **
40X,10HSECONDARY STRUCTURE//20X,
4HENCLOSURES (INCLUDING TURRET ENCLOSURES))
501 FORMAT(2X,14HCANOPY - PILOT,35X,F10.1)
503 FORMAT(2X,10HCANOPY - NAVIGATOR,31X,F10.1)
505 FORMAT(17,20X,40HSHIELD (INCLUDING BULLET PROTECTION),12X,
F10.1)
508 FORMAT(17,20X,30HWINDOWS AND PORTS INCL. FRAMES,80X,F10.1)
508 FORMAT(120X,25HWINDOWS AND PORTS - CABIN,27X,F10.1)
511 FORMAT(17,20X,43HFLOORING AND SUPPORTS (SECONDARY STRUCTURE),5X,
F10.1)
512 FORMAT(17,20X,25HSTAIRWAYS AND LADDERS (FIXED),23X,F10.1)

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## CHART TITLE - NON-PROCEDURAL STATEMENTS

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515  FORMAT(//20X,11HMOSE RADOME,4X,F10.1)
519  FORMAT(20X,11HTAIL RADOME,4X,F10.1)
523  FORMAT(20X,12HISC. RADOME,4X,F10.1)
525  FORMAT(//20X,37HSPEED BRAKES - STRUCTURE AND SUPPORTS,15X,F10.1)
527  FORMAT(//20X,3HOTHER,4X,F10.1)
530  FORMAT(20X,25HTOTAL SECONDARY STRUCTURE,37X,F10.1)
600  FORMAT(1H1,46X,18H*** BODY GROUP ***,33X,12H** SPRINT **
      46X,18HSECONDARY STRUCTURE/39X,
      33HDOORS, PANELS AND MISCELLANEOUS//60X,11HAREA-50.FT./20X,
      18HDOORS AND FRAMES)
601  FORMAT(26X,11H- MAIN GEAR,23X,F8.1,4X,F10.1)
603  FORMAT(26X,11H- NOSE GEAR,23X,F8.1,4X,F10.1)
605  FORMAT(26X,11H- AFT CARGO,23X,F8.1,4X,F10.1)
609  FORMAT(26X,12H- SIDE CARGO,23X,F8.1,4X,F10.1)
613  FORMAT(26X,10H- FWD RAMP,24X,F8.1,4X,F10.1)
617  FORMAT(26X,9H- TGE,29X,F8.1,4X,F10.1)
621  FORMAT(26X,10H- AFT RAMP,24X,F8.1,4X,F10.1)
629  FORMAT(26X,10H- PRESSURE,24X,F8.1,4X,F10.1)
631  FORMAT(26X,8H- BOOM,26X,F8.1,4X,F10.1)
633  FORMAT(26X,9H- GUN,4X,F10.1)
635  FORMAT(26X,8H- ARM,40X,F10.1)
637  FORMAT(26X,8H- ESCAPE,26X,F8.1,4X,F10.1)
643  FORMAT(26X,11H- PARATROOP,23X,F8.1,4X,F10.1)
645  FORMAT(26X,10H- ENTRANCE,24X,F8.1,4X,F10.1)
647  FORMAT(26X,8H- ACCESS,30X,F10.1)
649  FORMAT(26X,8H- I.F.R.,30X,F10.1)
653  FORMAT(26X,8H- R.A.T.,26X,F8.1,4X,F10.1)
661  FORMAT(26X,8H- ENGINE,26X,F8.1,4X,F10.1)
667  FORMAT(26X,11H- ACCESSORY,23X,F8.1,4X,F10.1)
669  FORMAT(20X,23HPANELS (NON STRUCTURAL))
683  FORMAT(26X,10H- SPOILER DEFLECTOR,27X,F10.1)
687  FORMAT(26X,13H- HEAT SHIELD,33X,F10.1)
671  FORMAT(26X,15H- MAIN GEAR POD,18X,F8.1,4X,F10.1)
675  FORMAT(26X,8H- DORSAL,26X,F8.1,4X,F10.1)
677  FORMAT(20X,28HALIGNAITS, STEPS, GRIPS,30X,F10.1)
679  FORMAT(26X,20HANTI-SKID PROTECTION,32X,F10.1)
681  FORMAT(26X,18HFAIRING AND FILLETS,33X,F10.1)
683  FORMAT(26X,15HINTERIOR FINISH,37X,F10.1)
685  FORMAT(26X,15HINTERIOR FINISH,37X,F10.1)
690  FORMAT(26X,48HTOTAL SECONDARY STRUCTURE (DOORS, PANELS, MISC.),
      14X,F10.1)
692  FORMAT(//20X,18HTOTAL - BODY GROUP,44X,F10.1)
700  FORMAT(1H1,46X,18H*** BODY GROUP ***,33X,12H** SPRINT **/46X,
      12HBALANCE DATA//73X,8HHEIGHT,5X,18HCHERIZ. ARM)
702  FORMAT(26X,28HJUNCTIONS AND FRAMES,20X,F12.2)
704  FORMAT(26X,28HJOINTS, SPLICES AND FASTENERS,11X,F12.2)
706  FORMAT(26X,12HMINOR FRAMES,26X,F12.2)
708  FORMAT(26X,18HCOVERING - UPPER,4X,F12.2/39X,4HSIDE,25X,F12.2/,
      39X,4HLOWER,24X,F12.2)
710  FORMAT(26X,37HLONGERONS AND LONGITUDINAL STIFFENERS,3X,F12.2/,
      66X,F12.2/66X,F12.2/66X,F12.2/66X,F12.2)
712  FORMAT(26X,11HENGINE DRAG,26X,F12.2)
714  FORMAT(26X,23HLONGITUDINAL PARTITIONS,17X,F12.2)
716  FORMAT(26X,21HFLOORING AND SUPPORTS,18X,F12.2)
718  FORMAT(26X,8HFITTINGS,32X,F12.2)
720  FORMAT(18X,21HTOTAL BASIC STRUCTURE,26X,F12.2)
722  FORMAT(//68X,18HSECONDARY STRUCTURE)
724  FORMAT(68X,F12.2)
726  FORMAT(18X,25HTOTAL S:CONDARY STRUCTURE,25X,F12.2)
730  FORMAT( 68X,31HDOORS, PANELS AND MISCELLANEOUS)
734  FORMAT(18X,48HTOTAL S:CONDARY STRUCTURE (DOORS, PANELS, MISC.),
      2X,F12.2)
736  FORMAT(//18X,18HTOTAL - BODY GROUP,32X,F12.2)

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AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - NON-PROCEDURAL STATEMENTS

000 FORMATTING, (2) END FUSELAGE

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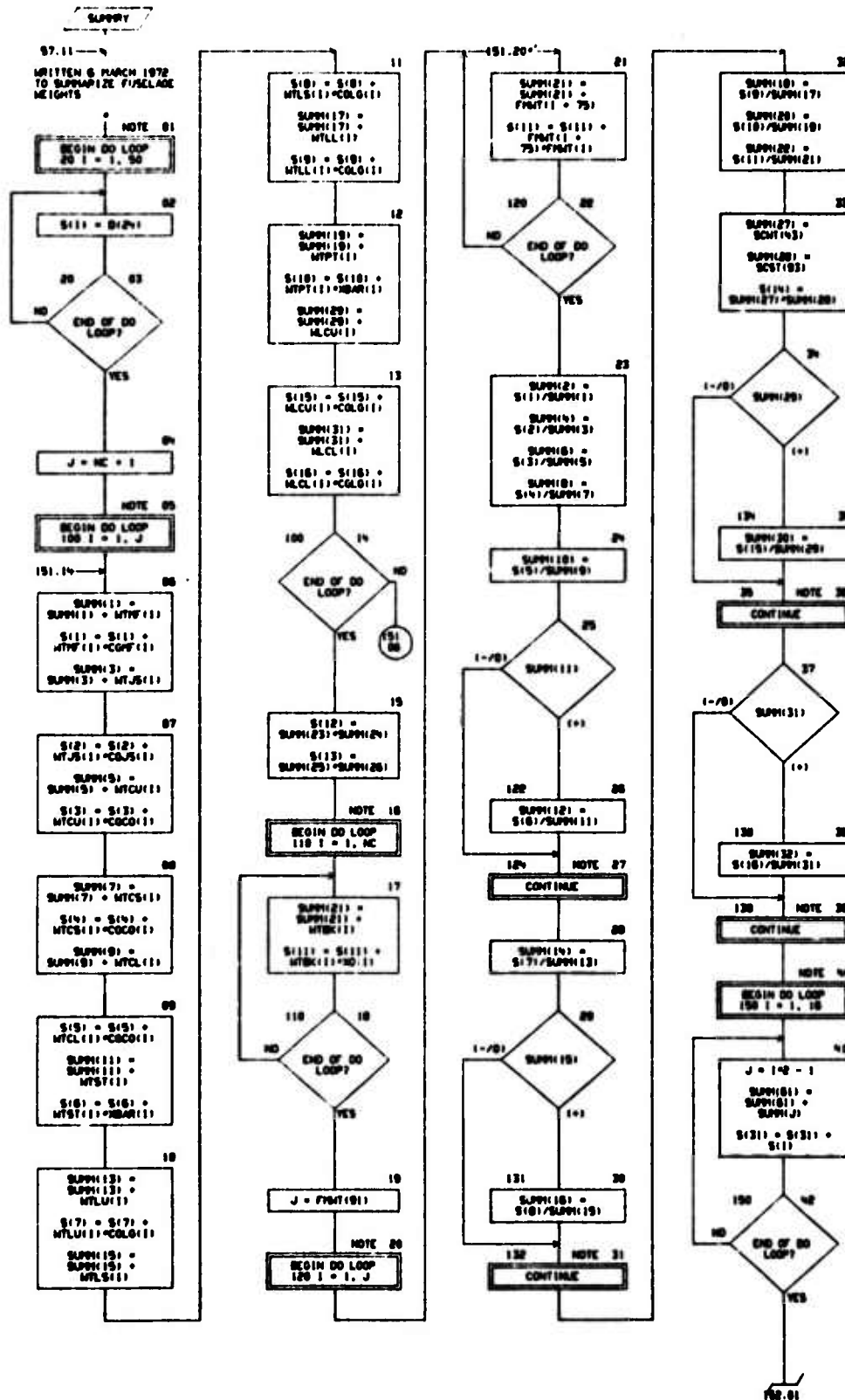
AUTOFLON CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - INTRODUCTORY COMMENTS

.....  
SUBROUTINE SUPPLY  
.....

CHART TITLE - SUBROUTINE SUPPLY







## CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON TCON(400)
DIMENSION D(200),T(200),DC(100),ND(200)
DIMENSION ND(20)
DIMENSION SCST(100)
DIMENSION MLCU(20),MLCL(20)
DIMENSION FPM(10)
DIMENSION S(100)
DIMENSION REAR(20)
DIMENSION MTCU(20),MTC5(20),MTCL(20),MTCT(20)
DIMENSION MTLU(20),MTLS(20),MTLL(20),MTST(20),MTLT(20)
DIMENSION MTHF(20),MTJS(20)
DIMENSION COCO(20),COLG(20),CONF(20),COJS(20)
DIMENSION MTK(20),MTP(20)
DIMENSION SCMT(50)
DIMENSION SUPH(100)
EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(101)),
(ND(1),TCON(401))
EQUIVALENCE (D(30),ND(1))
EQUIVALENCE (D(82),SCST(1))
EQUIVALENCE (D(103),MLCU(1)),(D(105),MLCL(1))
EQUIVALENCE (D(1010),FPM(1))
EQUIVALENCE (T(1),S(1))
EQUIVALENCE (T(30),REAR(1))
EQUIVALENCE (T(150),MTCU(1)),(T(152),MTC5(1)),
(T(154),MTCL(1)),(T(156),MTCT(1))
EQUIVALENCE (T(158),MTLU(1)),(T(160),MTLS(1)),
(T(162),MTLL(1)),(T(164),MTST(1)),(T(166),MTLT(1))
EQUIVALENCE (T(168),MTHF(1)),(T(170),MTJS(1))
EQUIVALENCE (T(172),COCO(1)),(T(174),COLG(1)),
(T(176),CONF(1)),(T(178),COJS(1))
EQUIVALENCE (T(180),MTK(1)),(T(182),MTP(1))
EQUIVALENCE (T(195),SCMT(1))
EQUIVALENCE (TCON(401),SUPH(1))
EQUIVALENCE (ND(101),1),(ND(102),J)
EQUIVALENCE (ND(111),NC),(ND(120),ICST)

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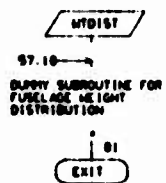
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CHART TITLE - INTRODUCTORY COMMENTS

#####  
SUBROUTINE HTD1ST  
#####

CHART TITLE - SUBROUTINE WTDIST



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AUTOFLOW CHART SET - SHEEP SECOND FUSELAGE OVERLAY

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CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON TCON(400)

DIMENSION D(2000),T(2000),DC(100),ND(200)

EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(2001)),(DC(1),TCON(401)),  
(ND(1),TCON(4201))

**PROGRAM LISTING**  
**OF**  
**SECOND FUSELAGE OVERLAY**

FORTRAN MODULE (LIST,AUTOSEQ)

CARD NO	CONTENTS	****
1	C	
2	C	
3	C	PROGRAM FUS02
4	C	
5	C	
6	C	PROGRAM FUS02
7	C	
8	C	COMMON TCON(400)
9	C	
10	C	COMMON /FDATE/ FDATE(80)
11	C	
12	C	DIMENSION SUPH(100)
13	C	
14	C	EQUIVALENCE (SUPH(1),TCON(400(1)))
15	C	
16	C	REHIND 24
17	C	
18	C	BUFFER IN(24,1)(TCON(1),TCON(400(1)))
19	C	
20	C	IF(UNIT(24))10,10,10
21	C	
22	C	10 CALL FUS04
23	C	
24	C	FDATE(31) = SUPH(1)
25	C	FDATE(32) = SUPH(3)
26	C	FDATE(33) = 0.0
27	C	FDATE(34) = SUPH(5)
28	C	FDATE(35) = SUPH(7)
29	C	FDATE(36) = SUPH(9)
30	C	FDATE(37) = 0.0
31	C	
32	C	
33	C	REHIND 24
34	C	
35	C	BUFFER OUT(24,1)(TCON(1),TCON(400(1)))
36	C	
37	C	IF(UNIT(24))20,20,20
38	C	
39	C	20 CONTINUE
40	C	END
41	C	
42	C	
43	C	SUBROUTINE BLJ005
44	C	
45	C	
46	C	SUBROUTINE BLJ005 7030010
47	C	WRITTEN 3 MARCH 1972 7030020
48	C	TO DETERMINE BLAKEHEAD HEIGHTS 7030030
49	C	7030040
50	C	COMMON TCON(400) 7030050
51	C	7030060
52	C	DIMENSION CIND(10) 7030071
53	C	DIMENSION S(2000),T(2000),DC(100),ND(200) 7030070
54	C	DIMENSION MD(20) 7030072
55	C	DIMENSION SHOT(20),CTOU(20) 7030074
56	C	DIMENSION PRES(20),RDEF(20) 7030080
57	C	DIMENSION S1(20),S1(20),S2(20),S2(20) 7030090
58	C	DIMENSION FYP(200) 7030100
59	C	DIMENSION ACTS(20),ANT(20),ANT(20),PERF(20),PERF(20),PROF(20), 7030110
60	C	IPRDA(20) 7030120
61	C	DIMENSION DEPF(20),DEPA(20),MIDF(20),MID(20) 7030130
62	C	DIMENSION MTK(20) 7030140
63	C	7030150
64	C	EQUIVALENCE (S(1),TCON(1)),(T(1),TCON(200(1))),DC(1),TCON(400(1)), 7030160
65	C	(ND(1),TCON(400(1))) 7030170
66	C	EQUIVALENCE (S(2),CIND(1)) 7030171
67	C	EQUIVALENCE (S(3),MD(1)) 7030172
68	C	EQUIVALENCE (S(4),SHOT(1)),(S(5),CTOU(1)) 7030174
69	C	EQUIVALENCE (S(6),PRES(1)),(S(7),RDEF(1)) 7030180
70	C	EQUIVALENCE (T(1),S1(1)),(T(10),S1(10)),(T(20),S2(1)), 7030190

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	****	CONTENTS	****
71		1 (1101),00(11)	70300100
72		EQUIVALENCE (11001),FHP(11)	70300200
73		EQUIVALENCE (01101),ACRS(11), (01101),ANTF(11),	70300300
74		(01101),ANTAI(11), (01101),PERF(11), (01101),PERAI(11),	70300400
75		(01101),PROF(11), (01101),PROAI(11)	70300500
76		EQUIVALENCE (01101),DEPF(11), (01101),DEPAI(11),	70300600
77		(01101),MIDF(11), (01101),MIDAI(11)	70300700
78		EQUIVALENCE (11001),MTBK(11)	70300800
79		EQUIVALENCE (01101),1)	70300900
80	C		70301000
81		00(11) = 0(01)	70301100
82	C	CHECK TORQUE AREA FORWARD AND AFT OF BALANCE	70301200
83		IF (ANTF(11) - ANTAI(11)) 10,10,12	70301300
84		10 00(0) = ANTAI(1)	70301400
85		GO TO 20	70301500
86		12 00(0) = ANTF(11)	70301600
87	C	SETUP CONSTANTS	70301700
88		00 00(1) = FHP(20)	70301800
89		00(0) = FHP(25)	70301900
90	C	SETUP FORWARD GEOMETRY	70302000
91		00(1) = DEPF(1)	70302100
92		00(2) = MIDF(1)	70302200
93	C	CHECK FORWARD PRESSURE	70302300
94		IF (PRES(11)) 110,100,100	70302400
95	C	CABIN PRESSURE	70302500
96		110 00(3) = - PRES(1)	70302600
97		00(4) = 0(20)	70302700
98		00(5) = 0(30)+0(30)	70302800
99	C	CABIN PRESSURE - IF THERE IS A CUTOFF ON TOP, IGNORE USE NET	70302900
100	C	AREA UPPER TO CALCULATE HEIGHT	70303000
101		110 IF (FACTOU(11)) 112,112,111	70303100
102		111 IF (IDMT(11)) 112,112,113	70303200
103		113 00(0) = ACRS(1) - ANTF(1)	70303300
104		00(1) = 0(4) - DEPF(1)	70303400
105		112 00(0) = FHP(200)+FHP(252)	70303500
106		0(1) = FHP(252)/00(0)	70303600
107		IF (0(1) - 00(0)) 114,115,115	70303700
108		114 00(0) = 0(1)	70303800
109		115 CALL DELNO	70303900
110		IF (00(11) - 00(10)) 117,200,200	70304000
111		117 00(11) = 00(10)	70304100
112		GO TO 200	70304200
113	C	PRESSURE IS ZERO CHECK FOR FUEL	70304300
114		100 00(3) = 0(20)	70304400
115		00(0) = MIDF(1)	70304500
116		IF (00(0)) 101,200,102	70304600
117		101 00(0) = - MIDF(1)	70304700
118	C	CALCULATE POSITIVE LOAD FACTOR	70304800
119		102 0(2) = 00(0) - 00(10)/0(20)/0(12)+ (00(1) - 00(7))	70304900
120	C	TEST FOR POSITIVE LOAD FACTOR	70305000
121		IF (0(2)) 103,103,100	70305100
122	C	LOAD FACTOR IS ZERO TEST FOR STATIC PRESSURE	70305200
123		103 IF (00(3)) 170,170,104	70305300
124		104 00(4) = 0(20)	70305400
125		GO TO 107	70305500
126		100 00(4) = 0(2)+00(12)+00(1)	70305600
127		107 00(5) = 00(0)	70305700
128		IF (00(0)) 100,100,100	70305800
129		100 00(5) = 0(30)	70305900
130		100 00(6) = FHP(252)/00(0)	70306000
131		CALL DELNO	70306100
132		IF (00(11) - 00(10)) 101,170,170	70306200
133		101 00(11) = 00(10)	70306300
134	C	CALCULATE NEGATIVE LOAD FACTOR	70306400
135		170 0(2) = 00(4) - 00(10)/0(20)/0(12)+ (00(1) - 00(7))	70306500
136	C	TEST NEGATIVE LOAD FACTOR	70306600
137		IF (0(2)) 170,170,170	70306700
138	C	LOAD FACTOR IS ZERO TEST FOR STATIC PRESSURE	70306800
139		170 IF (00(3)) 200,200,170	70306900
140		170 00(4) = 0(20)	70307000
141		GO TO 177	70307100

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	****	CONTENTS	****
142	170 00(4) = - 5(2)*00(12)*00(11)		70300070
143	177 00(0) = 02(13)		70300080
144	17(02(13)) 170,170,100		70300090
145	170 00(0) = 0(20)		70300100
146	100 00(0) = FVP(052)/00(0)		70300110
147	CALL 00L000		70300120
148	17(00(11)) - 00(10)) 101,101,200		70300130
149	101 00(11) = 00(10)		70300140
150	00 TO 200		70300150
151	C PRESSURE IS POSITIVE CHECK FOR FUEL		70300160
152	100 00(3) = PRES(1)		70300170
153	00(12) = R00F(1)		70300180
154	17(R00F(1)) 101,100,102		70300190
155	101 00(12) = - R00F(1)		70300200
156	00 TO 152		70300210
157	100 00(4) = 0(24)		70300220
158	00(0) = 0(20)		70300230
159	00 TO 110		
160	C SETUP AFT GEOMETRY		70300240
161	200 00(1) = DEPA(1)		70300250
162	00(2) = MIDM(1)		70300260
163	C CHECK AFT PRESSURE		70300270
164	17(PRES(1)) 210,250,200		70300280
165	C CABIN PRESSURE		70300290
166	210 00(3) = - PRES(1)		70300300
167	00(4) = 0(24)		70300310
168	00(0) = 0(20)*0(20)		70300320
169	212 00(0) = FVP(200)*FVP(252)		70300330
170	0(1) = FVP(252)/00(0)		70300340
171	17(0(1) - 00(0)) 214,210,210		70300350
172	214 00(0) = 0(1)		70300360
173	210 CALL 00L000		70300370
174	17(00(11)) - 00(10)) 217,400,400		70300380
175	217 00(11) = 00(10)		70300390
176	00 TO 400		70300400
177	C PRESSURE IS ZERO CHECK FOR FUEL		70300410
178	200 00(3) = 0(24)		70300420
179	00(12) = R00F(1)		70300430
180	17(R00F(1)) 201,400,202		70300440
181	201 00(12) = - R00F(1)		70300450
182	C CALCULATE POSITIVE LOAD FACTOR		70300460
183	202 0(2) = 00(0) - 00(10)/0(00)/0(12)*0(10(1) - 02(7))		70300470
184	C TEST FOR POSITIVE LOAD FACTOR		70300480
185	17(0(2)) 203,203,200		70300490
186	C LOAD FACTOR IS ZERO TEST FOR STATIC PRESSURE		70300500
187	203 17(00(3)) 270,270,204		70300510
188	204 00(4) = 0(24)		70300520
189	00 TO 257		70300530
190	205 00(4) = 0(2)*00(12)*00(11)		70300540
191	257 00(0) = 0(20)		70300550
192	17(00(0)) 200,200,200		70300560
193	200 00(0) = 0(20)		70300570
194	200 00(0) = FVP(202)/00(0)		70300580
195	CALL 00L000		70300590
196	17(00(11)) - 00(10)) 201,201,270		70300600
197	201 00(11) = 00(10)		70300610
198	C CALCULATE NEGATIVE LOAD FACTOR		70300620
199	270 0(2) = 00(4) - 00(10)/0(00)/0(12)*0(10(1) - 02(7))		70300630
200	C TEST NEGATIVE LOAD FACTOR		70300640
201	17(0(2)) 270,270,270		70300650
202	C LOAD FACTOR IS ZERO TEST FOR STATIC PRESSURE		70300660
203	270 17(00(3)) 400,400,274		70300670
204	274 00(4) = 0(24)		70300680
205	00 TO 277		70300690
206	275 00(4) = - 0(2)*00(12)*00(11)		70300700
207	277 00(0) = 02(13)		70300710
208	17(02(13)) 270,270,200		70300720
209	270 00(0) = 0(20)		70300730
210	200 00(0) = FVP(252)/00(0)		70300740
211	CALL 00L000		70300750
212	17(00(11)) - 00(10)) 201,201,400		70300760



04/10/74	INPUT LISTING	AUTOFLOW CHART SET - WEEP	SECOND FUELAGE OVERLAY
CARD NO	CONTENTS		
213	201 SS(11) = SS(10)		70351570
214	GO TO 400		70351580
215	C PRESURE IS POSITIVE CHECK FOR FUEL		70351590
216	200 SS(13) = PRES(11*1)		70351600
217	SS(12) = R007(11*1)		70351610
218	IF (R007(11*1) - 201,205,252		70351620
219	201 SS(12) = - R007(11*1)		70351630
220	GO TO 252		70351640
221	200 SS(14) = S(24)		70351650
222	SS(15) = S(25)		70351660
223	GO TO 212		70351670
224	C CALCULATE HEIGHT - PLEASE		70351680
225	C DETERMINE EDGE CONSIDERATIONS		70351690
226	400 IF (P007(11) - PERA(11) * 20,410,430		70351700
227	410 S(2) = P007(11)		70351710
228	GO TO 500		70351720
229	420 S(2) = PERA(11) + P007(11)		
230	GO TO 500		
231	430 S(2) = P007(11) + PERA(11)		
232	C APPLY INDEX FACTOR TO BULKHEAD HEIGHT		70351800
233	500 NTK(1) = (SS(15) + S(2)*D(13)) * SS(11) * TYP(25) * C(IND(13))		70351810
234	C *** EXIT ***		7035
235	RETURN		70350000
236	END		70350000
237	C		
238	C		
239	C SUBROUTINE CUTOUT		
240	C		
241	C		
242	C SUBROUTINE CUTOUT		
243	C WRITTEN 24 APRIL 1972		
244	C TO DEVELOP PANEL NET EFFECTIVENESS DUE TO CUTOUTS		
245	DIMENSION S(100)		
246	C		
247	COMMON TCON(400)		
248	C		
249	DIMENSION D(2000),T(2000),DC(100),ND(200)		
250	DIMENSION BU(20),BL(20)		
251	DIMENSION CT0U(20),CT0L(20),DELX(20)		
252	DIMENSION RTU(20),RTL(20)		
253	C		
254	EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(2001)),(DC(1),TCON(4101)),		
255	(ND(1),TCON(4201))		
256	EQUIVALENCE (D(151),RTU(1)),(D(153),RTL(1))		
257	EQUIVALENCE (T(1),S(1))		
258	EQUIVALENCE (T(20),BU(1)),(T(201),BL(1)),(T(201),DELX(1))		
259	EQUIVALENCE (D(401),CT0U(1)),(D(401),CT0L(1))		
260	EQUIVALENCE (ND(101),1),ND(111),NC)		
261	C		
262	DO 10 I=1,NC		
263	RTU(I) = S(24)		
264	RTL(I) = S(24)		
265	10 CONTINUE		
266	S(1) = S(24)		
267	S(2) = S(24)		
268	DO 200 I=1,NC		
269	IF (CT0U(I)) 101,102,101		
270	101 RTU(I) = CT0U(I)		
271	IF (RTU(I)) 100,100,104		
272	100 RTU(I) = - CT0U(I)		
273	104 IF (RTU(I) - S(1)) 100,100,106		
274	100 RTU(I) = BU(I)		
275	100 IF (BL(I) - RTU(I)) 110,112,112		
276	110 RTU(I) = BL(I)		
277	112 S(1) = RTU(I)		
278	GO TO 200		
279	200 IF (S(1)) 150,150,152		
280	152 IF (S(1)/DELX(I) - S(1)) 124,124,120		
281	124 RTU(I) = S(24)		
282	S(1) = S(24)		
283	GO TO 150		

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INPUT LISTING

AUTOFLON CHART SET - SHEEP

SECOND FUSELAGE OVERLAY

CARD NO

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CONTENTS

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204      126 RTU(1) = S(1) - DELX(1)
205      S(1) = RTU(1)
206      C      TEST AFT SECTION FOR CUTOUTS
207      150 IF(1 - NC) 151,200,200
208      151 IF(BU(1) - DELX(1+1)) 152,152,153
209      152 IF(BU(1+1) - DELX(1+1)) 200,160,153
210      153 IF(CTOU(1+1)) 155,100,155
211      155 S(2) = CTOU(1+1)
212      IF(S(2)) 157,157,150
213      157 S(2) = - CTOU(1+1)
214      150 IF(S(2) - D(1)) 161,161,163
215      161 S(2) = BU(1+1)
216      163 IF(BU(1+1) - S(2)) 165,167,167
217      165 S(2) = BU(1+1)
218      167 S(4) = S(2) - DELX(1+1)
219      IF(RTU(1) - S(4)) 180,200,200
220      180 RTU(1) = S(4)
221      IF(BU(1) - RTU(1)) 171,173,173
222      171 RTU(1) = BU(1)
223      173 S(1) = RTU(1)
224      GO TO 200
225      180 IF(1 - NC) 181,200,200
226      181 IF (BU(1) - DELX(1+1) - DELX(1+2)) 182,182,183
227      182 IF(BU(1+2) - DELX(1+1) - DELX(1+2)) 200,200,183
228      183 IF(CTOU(1+2)) 185,200,185
229      185 S(3) = CTOU(1+2)
230      IF(S(3)) 187,187,100
231      187 S(3) = - CTOU(1+2)
232      180 IF(S(3) - D(1)) 191,191,193
233      191 S(3) = BU(1+2)
234      193 IF(BU(1+2) - S(3)) 195,195,195
235      195 S(3) = BU(1+2)
236      195 S(4) = S(3) - DELX(1+1) - DELX(1+2)
237      IF(RTU(1) - S(4)) 197,200,200
238      197 RTU(1) = S(4)
239      IF(BU(1) - RTU(1)) 199,199,199
240      199 RTU(1) = BU(1)
241      199 S(1) = RTU(1)
242      C      TEST LOWER CUTOUTS
243      200 IF(CTOL(1)) 201,200,201
244      201 RTL(1) = CTOL(1)
245      IF(RTL(1)) 202,202,204
246      202 RTL(1) = - CTOL(1)
247      204 IF(RTL(1) - D(1)) 206,206,200
248      206 RTL(1) = BL(1)
249      200 IF(BL(1) - RTL(1)) 210,212,212
250      210 RTL(1) = BL(1)
251      212 S(2) = RTL(1)
252      GO TO 200
253      200 IF(S(2)) 200,200,202
254      202 IF(S(2)/DELX(1) - D(1)) 204,204,205
255      204 RTL(1) = S(2)
256      S(2) = S(2)
257      GO TO 200
258      206 RTL(1) = S(2) - DELX(1)
259      S(2) = RTL(1)
260      C      TEST AFT SECTION FOR CUTOUTS
261      250 IF(1 - NC) 251,300,300
262      251 IF(BL(1) - DELX(1+1)) 252,252,253
263      252 IF(BL(1+1) - DELX(1+1)) 300,300,253
264      253 IF(CTOL(1+1)) 255,300,255
265      255 S(3) = CTOL(1+1)
266      IF(S(3)) 257,257,250
267      257 S(3) = - CTOL(1+1)
268      250 IF(S(3) - D(1)) 261,261,263
269      261 S(3) = BL(1+1)
270      263 IF(BL(1+1) - S(3)) 265,267,267
271      265 S(3) = BL(1+1)
272      267 S(4) = S(3) - DELX(1+1)
273      IF(RTL(1) - S(4)) 280,300,300
274      280 RTL(1) = S(4)

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## INPUT LISTING

AUTOFLAN CHART SET - SHEEP

SECOND FUSELAGE OVERLAY

CARD NO	CONTENTS	*****
355	IF(BL(1) - RTL(1)) 271,273,275	
356	271 RTL(1) = BL(1)	
357	273 S(2) = RTL(1)	
358	GO TO 500	
359	280 IF(1 - NC) 291,500,500	
360	281 IF(BL(1) - DELX(1+1) - DELX(1+2)) 282,282,283	
361	282 IF(BL(1+2) - DELX(1+1) - DELX(1+2)) 500,500,283	
362	283 IF(CTOL(1+2)) 295,500,295	
363	295 S(3) = CTOL(1+2)	
364	IF(S(3)) 297,297,299	
365	297 S(3) = - CTOL(1+2)	
366	299 IF(S(3) - 0(1)) 291,291,293	
367	291 S(3) = BL(1+2)	
368	293 IF(BL(1+2) - S(3)) 295,295,295	
369	295 S(3) = BL(1+2)	
370	296 S(4) = S(3) - DELX(1+1) - DELX(1+2)	
371	IF(RTL(1) - S(4)) 297,500,500	
372	297 RTL(1) = S(4)	
373	IF(DEL(1) - RTL(1)) 298,298,298	
374	298 RTL(1) = BL(1)	
375	298 S(2) = RTL(1)	
376	500 CONTINUE	
377	RETURN	
378	END	
379	C	
380	C (*****)	
381	C SUBROUTINE CVPRES	
382	C (*****)	
383	C	
384	SUBROUTINE CVPRES	70320010
385	REVISED 12 DECEMBER 1972 TO ACCOUNT FOR HOOP EFFECT	70320030
386	1 TO DETERMINE COVER PRESSURE REQUIREMENTS	70320040
387	C	70320050
388	COMMON TCON(400)	70320060
389	C	70320070
390	DIMENSION D(2000),T(2000),DC(100),ND(200)	70320080
391	DIMENSION EQJA(100)	70320090
392	DIMENSION ND(20),DOHT(20)	70320100
393	DIMENSION PRES(20),R4OF(20)	70320110
394	DIMENSION S(100),S(20),S2(20),S3(20),FYP(300)	70320120
395	DIMENSION RCJ(20),ACL(20),ACS(20)	70320130
396	C	70320140
397	EQUIVALENCE (D(1),TCON(1),(T(1),TCON(200)),DC(1),TCON(401)),	70320150
398	(ND(1),TCON(401))	70320160
399	EQUIVALENCE (D(81),EQJA(1))	70320170
400	EQUIVALENCE (D(361),ND(1))	70320180
401	EQUIVALENCE (D(441),DOHT(1))	70320190
402	EQUIVALENCE (D(601),PRES(1),(D(621),R4OF(1))	70320200
403	EQUIVALENCE (T(1),S(1),(T(101),S(11),(T(121),S2(1)),	70320210
404	(T(141),S3(1),(T(161),FYP(1))	70320220
405	EQUIVALENCE (T(241),RCJ(1),(T(261),ACL(1),(T(281),ACS(1))	70320230
406	EQUIVALENCE (ND(101),J1,ND(102),J1,ND(125),IMIL)	70320240
407	C	70320250
408	C CLEAR PRESSURE DESIGN THICKNESS REGION	70320260
409	S3(12) = S(24)	70320270
410	S3(13) = S(24)	70320280
411	S3(14) = S(24)	70320290
412	S3(15) = S(24)	70320300
413	S3(16) = S(24)	70320310
414	S3(17) = S(24)	70320320
415	C CLEAR SEPARON REGION	70320330
416	GO TO J-1,20	70320340
417	S(J) = S(24)	70320350
418	10 CONTINUE	70320360
419	C TEST ON DESIGN CRITERIA	70320370
420	IF(PRES(1)) 100,200,200	70320380
421	C HUMAN ENVIRONMENT	70320390
422	100 S(2) = S(20)*S(20)	70320400
423	S(11) = - PRES(1)	70320410
424	102 S(12) = S(11)	70320420
425	IF(DOHT(1)) 110,110,115	70320430

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CARD NO	****	CONTENTS	****
406	C	THERE IS NO DECK - TOTAL SECTION IS PRESSURIZED	70320440
407		110 S(13) = S(12)	70320450
408		115 S(14) = FWP(70)/FWP(00)	70320460
409		S(3) = FWP(70)/S(2)	70320470
430		10(S(14) .LT. S(3)) S(3) = S(14)	70320480
431		S(14) = S(3)	70320490
432		S(5) = S(3)	70320500
433		GO TO 400	70320510
434	C	POSITIVE PRESSURE - TEST FOR LIQUID	70320520
435		200 IF(RDIF(1)) 210,202,210	70320530
436		202 S(2) = 0.301	70320540
437	C	COMPARTMENT IS PRESSURIZED FOR EQUIPMENT ENVIRONMENT	70320550
438		S(11) = PRES(1)	70320560
439		GO TO 102	70320570
440	C	LIQUID IN COMPARTMENT SETUP CONSTANTS	70320580
441		210 S(8) = S2(8) - S2(10)/D(20)/D(12)*IND(1) - S2(7)	70320590
442		S(7) = S2(14) - S2(15)/D(20)/D(12)*IND(1) - S2(12)	70320600
443	C	TEST ON LOAD FACTOR CONDITION	70320610
444		IF(S2(8)) 212,212,214	70320620
445	C	THERE IS NO POSITIVE LOAD FACTOR CONDITION	70320630
446		212 S(8) = 0.301	70320640
447		214 IF(S2(13)) 210,210,210	70320650
448	C	THERE IS NO NEGATIVE LOAD FACTOR CONDITION	70320660
449		210 S2(13) = 0.301	70320670
450		210 IF(RDIF(1)) 220,220,250	70320680
451	C	RDIF IS NOT ZERO - LIQUID IS BELOW DECK	70320690
452		220 S(8) = S(14)*RDIF(1)	70320700
453	C	S(3) = 0.0	70320710
454		S(4) = FWP(70)/S2(13)	70320720
455		S(5) = FWP(70)/S2(8)	70320730
456	C	S(11) = 0.0	70320740
457		S(12) = PRES(1) + RDIF(1)*S(7)*S(8)	70320750
458		S(13) = PRES(1) + RDIF(1)*S(5)*S(8)	70320760
459		GO TO 400	70320770
460	C	LIQUID IS ABOVE DECK OR THERE IS NO DECK AT ALL	70320780
461		250 S(8) = S(14)*D(1) - RDIF(1)	70320790
462		S(3) = FWP(70)/S2(13)	70320800
463		S(4) = FWP(70)/S2(8)	70320810
464		S(11) = PRES(1) + RDIF(1)*S(7)*S(8)	70320820
465		S(12) = PRES(1) + RDIF(1)*S(5)*S(8)	70320830
466	C	S(13) = 0.0	70320840
467		IF(RDIF(1)) 252,252,400	70320850
468		252 S(13) = S(12)	70320860
469		S(5) = S(4)	70320870
470		GO TO 400	70320880
471	C	PRESSURE IS ZERO - CHECK ON LIQUID	70320890
472		300 IF(RDIF(1)) 210,1000,210	70320900
473	C	SYNTHESIZE COVER FOR PRESSURE	70320910
474	C	TEST ON UPPER COVER	70320920
475		400 IF(S(11)) 400,400,400	70320930
476		400 S3(12) = EQUA(27)*S3(8)*S(11)*EQUA(20)/(FWP(00)*EQUA(20))	70320940
477		1 (S(3)*EQUA(20))	70320950
478		S(14) = S3(12)	70320960
479		IF(RCU(1)) 420,420,420	70320970
480		420 S(14) = S(11)*RCU(1)/S(3)	70320980
481		IF(S(14) .LT. S3(12)) S3(12) = S(14)	70320990
482	C	TEST ON SIDE COVER	70321000
483		420 IF(S(12)) 440,440,420	70321010
484		420 S3(13) = EQUA(27)*S3(8)*S(12)*EQUA(20)/(FWP(00)*EQUA(20))	70321020
485		1 (S(4)*EQUA(20))	70321030
486		S(15) = S3(13)	70321040
487		IF(RCS(1)) 440,440,420	70321050
488		420 S(15) = S(12)*RCS(1)/S(4)	70321060
489		IF(S(15) .LT. S3(13)) S3(13) = S(15)	70321070
490	C	TEST ON LOWER COVER	70321080
491		440 IF(S(13)) 500,500,440	70321090
492		440 S3(14) = EQUA(27)*S3(8)*S(13)*EQUA(20)/(FWP(00)*EQUA(20))	70321100
493		1 (S(5)*EQUA(20))	70321110
494		S(16) = S3(14)	70321120
495		IF(RCL(1)) 500,500,440	70321130
496		440 S(16) = S(13)*RCL(1)/S(5)	70321140



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CARD NO	****	CONTENTS	****
030	C		
040		SUBROUTINE FEND	70340010
041	C	WRITTEN 2 FEBRUARY 1970	70340020
042	C	TO DEVELOP LONGERON AND COVER REQUIREMENTS FOR SHELL BENDING	70340030
043	C		70340040
044		COMMON TCOM(400)	70340050
045	C		70340060
046		DIMENSION D(2000),T(2000),DC(100),MD(200)	70340070
047		DIMENSION EQUA(100)	70340080
048		DIMENSION CTOU(20),CTOL(20)	70340090
049		DIMENSION ALCU(20),ALCL(20)	70340100
050		DIMENSION RTU(20),RTL(20)	70340110
051		DIMENSION EIVT(20),EISD(20)	70340120
052		DIMENSION EIVA(20),EISA(20)	70340130
053		DIMENSION S(100),S1(20),S2(20),S3(20),S4(20)	70340140
054		DIMENSION RO(120),RCL(20),BU(20),BL(20),BS(20)	70340150
055		DIMENSION OOD(20),MO(20),RO(20)	70340160
056		DIMENSION TCU(20),TCS(20),TCL(20),ALU(20),ALL(20),ALS(20),ALT(20)	70340170
057		DIMENSION STRH(20),BSTR(20),PMAX(20),FYP(300)	70340180
058		DIMENSION TOT(20)	70340190
059	C		70340200
060		EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(401)),	70340210
061		(MO(1),TCOM(402))	70340220
062		EQUIVALENCE (D(61),EQUA(1))	70340230
063		EQUIVALENCE (D(461),CTOU(1)),(D(461),CTOL(1))	70340240
064		EQUIVALENCE (D(1061),EIVT(1)),(D(1061),EISD(1))	70340250
065		EQUIVALENCE (D(1561),RTU(1)),(D(1561),RTL(1))	70340260
066		EQUIVALENCE (D(1951),EIVA(1)),(D(1951),EISA(1))	70340270
067		EQUIVALENCE (D(1991),ALCU(1)),(D(1991),ALCL(1))	70340280
068		EQUIVALENCE (MO(107),1)	70340290
069		EQUIVALENCE (T(1),S(1)),(T(101),S1(1)),(T(121),S2(1)),	70340300
070		(T(141),S3(1)),(T(161),S4(1))	70340310
071		EQUIVALENCE (T(241),ROU(1)),(T(261),RCL(1)),	70340320
072		(T(321),BU(1)),(T(321),BL(1)),(T(341),BS(1))	70340330
073		EQUIVALENCE (T(441),OOD(1)),(T(461),MO(1)),(T(481),RO(1))	70340340
074		EQUIVALENCE (T(621),TCU(1)),(T(641),TCS(1)),(T(661),TCL(1)),	70340350
075		(T(681),ALU(1)),(T(701),ALL(1)),(T(721),ALS(1)),(T(741),ALT(1))	70340360
076		EQUIVALENCE (T(801),STRH(1)),(T(821),BSTR(1)),(T(841),PMAX(1)),	70340370
077		(T(1201),FYP(1))	70340380
078		EQUIVALENCE (T(201),TOT(1))	70340390
079		EQUIVALENCE (MO(101),1), (MO(102),1), (MO(103),1), (MO(104),1),	70340400
080	C		70340410
081	C	SETUP COUNTER AND INITIAL ALLOWABLE STRESS	70340420
082	C	INITIALIZE AREAS	70340430
083		S(4) = D(24)	70340440
084		S(6) = D(24)	70340450
085		S(7) = D(53)	70340460
086		I/(S(6) - S(5)) 600,000,000	70340470
087	C	*** DETERMINE PANEL INDUCED COMPRESSION AND CRIPPLING ***	70340480
088		S(40) = D(61)*D(13) + D(62)	70340490
089		S(41) = D(61)*D(19) + D(62)*D(13) + D(62)	70340500
090		S(42) = D(61)*D(21)*S(41)**2 + D(61)**2/D(12) +	70340510
091		(D(61)/D(2) - S(41)**2 + D(62)*D(61) - S(41)**2)	70340520
092		S(43) = (S(42)/S(40))**.5	70340530
093		S(44) = D(53)/S(40)	70340540
094		S(45) = D(1) + (S(41)/S(43))**2	70340550
095		S(47) = D(10)*D(1) - S(45)*FYP(105)/FYP(105)	70340560
096		S(48) = FYP(105)/EQUA(45)/(FYP(105)/FYP(105) + EQUA(45))**.5	70340570
097	C	S(51) = ALLOWABLE STRESS FOR STRINGER	70340580
098		S(51) = S(48)/(EQUA(45) + EQUA(42)*EQUA(45))	70340590
099		+ (FYP(105)/FYP(105))**D(11)/D(1)	70340600
100	C	S(52) = F/FPMAX	70340610
101		S(52) = D(1)	70340620
102		I/(S(51)/STRH(1) - EQUA(30)) 620,621,621	70340630
103		S(52) = D(1)/(EQUA(30) + D(1) - S(45)/(EQUA(40) -	70340640
104		(EQUA(45)*S(51)/STRH(1)))	70340650
105	C	HEBA = S(53), HEAB = S(54), HEAC = S(57)	70340660
106		S(53) = (S(51)/FAN(513)/S(51)/S(52))**.5*TCS(1)*D(14)	70340670
107		S(54) = S(48)/S(45)/S(51)/TCS(1)	70340680
108		I/(ICST *E. D) S(54) = S(54)*D(2)	70340690
109		S(55) = S(47)	70340700

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
710	S(45) = S(44)		70340620
711	030 S(56) = S(45)		70340630
712	S(57) = S(56)*S(54) + S(47)		70340640
713	S(58) = S(57)*.2		70340650
714	S(59) = S(58)*S(57)		70340660
715	S(60) = S(59)*S(56) - S(53)		70340670
716	S(45) = S(56) - S(60)/(D(3)*S(54)*S(56)*S(58) + S(59))		70340680
717	S(61) = S(45) - S(56)		70340690
718	IF(S(61)) 031,040,632		70340700
719	031 S(61) = - S(61)		70340710
720	632 IF(S(61) - EQU(45)/D(10)) 040,040,630		70340720
721	040 IF(S(45) - S(44)) 041,700,700		70340730
722	041 S(45) = S(44)		70340740
723	700 S(45) = (S(44)*S(51)/TAN(S(43)/(S(45)*S(54) + S(47))) / S(52)		70340750
724	S(47) = S(45)*S(48)		70340760
725	S(48) = S(45)*S(47)		70340770
726	IF(S(47) - D(53)) 710,000,000		70340780
727	710 S(47) = D(53)		70340790
728	S(45) = S(48)/S(47)		70340800
729	000 CONTINUE		70340802
730	C     SETUP MINIMUM AND INITIAL AREAS		70340804
731	ALCL(1) = D(24)		70340806
732	ALCL(1) = D(24)		70340808
733	IF(RTU(1)) 75,75,71		70340810
734	71 ALCL(1) = D(53)		70340812
735	C     *** NOTE THIS PORTION ONLY WORKS FOR ROUNDED RECTANGLES		70340814
736	IF(RTU(1) - D(2)*MD(1)) 72,72,74		70340816
737	72 S(36) = RO(1) + D(1)		70340818
738	S(62) = RTU(1)/D(2)		70340820
739	80 TO 75		70340822
740	74 S(36) = D(1) + RO(1)*COS((RTU(1)/D(2) - MD(1))/RO(1))		70340824
741	S(62) = MD(1) + RO(1)*SIN((RTU(1)/D(2) - MD(1))/RO(1))		70340826
742	75 IF(RTL(1)) 80,80,76		70340828
743	76 ALCL(1) = D(53)		70340830
744	IF(RTL(1) - D(2)*MD(1)) 77,77,78		70340832
745	77 S(37) = RO(1) + D(1)		70340834
746	S(63) = RTL(1)/D(2)		70340836
747	80 TO 80		70340838
748	78 S(37) = D(1) + RO(1)*COS((RTL(1)/D(2) - MD(1))/RO(1))		70340840
749	S(63) = MD(1) + RO(1)*SIN((RTL(1)/D(2) - MD(1))/RO(1))		70340842
750	80 CONTINUE		70340844
751	S(5) = D(53)		70340846
752	IF(1CST - 2) 90,95,90		70340850
753	90 S(2) = S(47)		70340852
754	S(3) = D(24)		70340854
755	S(4) = S(47)		70340856
756	90 TO 95		70340860
757	95 S(2) = D(53)		70340862
758	S(3) = S(47)		70340864
759	S(4) = D(53)		70340866
760	95 CONTINUE		70340868
761	C		70340870
762	C     *** SETUP WORKING STRESS DOWN BENDING CONDITION		70340872
763	FMAX(1) = FWP(126)*D(80)		70340874
764	C     DETERMINE COVER WORKING STRESS		70340876
765	S(6) = FMAX(1)*FWP(35)/FWP(125)		70340878
766	IF(FWP(48)*FWP(42) - S(6)) 101,102,102		70340880
767	101 S(6) = FWP(48)*FWP(42)		70340882
768	FMAX(1) = S(6)*FWP(125)/FWP(35)		70340884
769	102 S(7) = S(4)/D(2)		70340886
770	S(8) = FMAX(1)/S(7)		70340888
771	S(9) = S(6)/S(7)		70340890
772	C     80 DOWN BENDING		70340892
773	S(10) = - S(2)/D(2)		70340894
774	C     CHECK UPPER HALF		70340896
775	S(11) = R(1)		70340898
776	C     DETERMINE MOMENT CARRIED BY UPPER COVER, SIDE AND INTERMEDIATE		70340900
777	C     LONGERONS		70340902
778	S(12) = TCU(1)*S(8)*S(9) + BU(1) - S(11)/BU(1) +		70340904
779	IS(3)*S(8)*S(15)/D(2) - S(5)*S(8)*S(17)/D(2)		70340906
780	S(13) = S(10) - S(12)		70340908



04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	****	CONTENTS	****
701		IF(S13) 150,150,121	7031170
702		121 S(14) = S(13)/S(8)/S(11)	7031180
703		IF(S14) .GT. S(2) S(2) = S(14)	7031182
704		IF(1CST - 2) 150,130,150	7031184
705		130 IF(RTU(1)) 150,150,131	7031186
706		131 S(13) = S(13)*RTU(1)/BU(1)	7031188
707		S(30) = S(13)/S(8)/D(2)/S(36)**2	7031190
708		IF(S(30) .GT. ALCU(1)) ALCU(1) = S(30)	7031192
709	C	CHECK LOWER HALF	7031194
710		150 S(11) = RTU(1)	7031196
711		S(15) = BL(1)	7031198
712	C	CHECK CONSTRUCTION	7031200
713		IF(1CST - 2) 171,100,171	7031202
714		171 S(10) = BL(1)	7031204
715		GO TO 105	7031206
716		100 S(10) = (BL(1) - S(11))	7031208
717		S(15) = BSTR(1)	7031210
718	C	DETERMINE EFFECTIVE COVER IN COMPRESSION	7031212
719		105 S(22) = BL(1) - S(11)	7031214
800		S(17) = D(24)	7031216
801		IF(RCL(1)) 240,240,105	7031218
802		105 S(10) = D(5)/D(3)	7031220
803		S(17) = D(8)*(TCL(1)/RCL(1))**S(10)	7031222
804		240 S(10) = D(4)/D(3)	7031224
805		S(10) = (S(17) + EQUIV(0)*(TCL(1)/BPM(1))**S(10) +	7031226
806		1043)*D(15)**2/D(12)/D(11) - FWP(32)**2*(TCL(1)/S(15))**2)*	7031228
807		BWP(35)	7031230
808		S(20) = D(12)*EQUIV(0)*TCL(1)*(FWP(35)/S(6))**.5	7031232
809		IF(S(15) - S(20)) 241,250,250	7031234
810		241 S(20) = S(15)	7031236
811		250 S(21) = S(20)*TCL(1)*S(9)*S(112)*S(10)/BL(1)	7031238
812		IF(S(10) - S(11)) 251,251,250	7031240
813		251 S(21) = TCL(1)*S(9)*S(10)*S(122)/BL(1)	7031242
814	C	DETERMINE MOMENT CARRIED BY LOWER COVER, SIDE AND INTERMEDIATE	7031244
815	C	LOADERONS	7031246
816		260 S(12) = S(21) + S(3)*S(8)*S(15)/D(2) + S(5)*S(8)*S(17)/D(2)	7031248
817		S(13) = S(10) - S(12)	7031250
818		IF(S(13)) 300,300,261	7031252
819		261 S(14) = S(13)/S(8)/S(112)	7031254
820		IF(1CST - 2) 265,200,205	7031256
821	C	LOADERON CONSTRUCTION	7031258
822		205 S(9) = PMAX(1)*S(11)*S(14)	7031260
823		S(95) = (S(9) + S(10))/FWP(120)/D(60)	7031262
824		IF(S(14) - S(95)) 266,200,200	7031264
825		200 S(14) = S(95)	7031266
826		200 IF(S(14) .GT. S(4)) S(4) = S(14)	7031268
827		IF(1CST - 2) 300,200,300	7031270
828		200 IF(RTU(1)) 300,300,291	7031272
829		291 S(13) = S(13)*RTU(1)/BL(1)	7031274
830		S(30) = S(13)/S(8)/D(2)/S(37)**2	7031276
831		IF(S(30) .GT. ALCL(1)) ALCL(1) = S(30)	7031278
832	C		7031280
833	C	*** SETUP WORKING STRESS UP BENDING CONDITION ***	7031282
834		300 PMAX(1) = FWP(85)/D(60)	7031284
835	C	DETERMINE COVER WORKING STRESS	7031286
836		S(6) = PMAX(1)*FWP(15)/FWP(95)	7031288
837		IF(FWP(10)*FWP(12) - S(6)) 301,302,302	7031290
838		301 S(6) = FWP(10)*FWP(12)	7031292
839		PMAX(1) = S(6)*FWP(95)/FWP(15)	7031294
840		302 S(7) = S(14)/D(2)	7031296
841		S(8) = PMAX(1)/S(7)	7031298
842		S(9) = S(8)/S(7)	7031300
843		S(10) = S(2)/D(2)	7031302
844	C	CHECK UPPER HALF	7031304
845		S(11) = RTU(1)	7031306
846		S(15) = BU(1)	7031308
847	C	CHECK CONSTRUCTION	7031310
848		IF(1CST - 2) 311,312,311	7031312
849		311 S(10) = BU(1)	7031314
850		GO TO 315	7031316
851		312 S(10) = (BU(1) - S(11))	7031318

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
052		S(15) = BSTR(1)	70341000
053	C	DETERMINE EFFECTIVE COVER IN COMPRESSION	70341000
054		315 S(22) = BU(1) - S(11)	70341000
055		S(17) = D(2)	70341010
056		IF(RCU(1)) 320,320,316	70341020
057		316 S(10) = D(3)/D(3)	70341030
058		S(17) = D(3)*(TCU(1)/RCU(1))*S(10)	70341040
059		320 S(10) = D(4)/D(3)	70341050
060		A(10) = (S(17) + EQUA(40)*(TCU(1)/BPM(1))*S(10) +	70341060
061		10(43)*D(15)**2/D(12)/D(1) - BPM(2)**2*(TCU(1)/S(15))**2)*	70341070
062		BPM(5)	70341080
063		S(20) = EQUA(40)*(TCU(1)/BPM(5)/S(6))**5	70341090
064		IF(S(15) - S(20)) 321,330,330	70342000
065		321 S(20) = S(15)	70342010
066		330 S(21) = S(20)*(TCU(1)*S(6)*S(11)*S(15)/BU(1)	70342020
067		IF(S(6) - S(10)) 331,331,340	70342030
068		331 S(21) = TCU(1)*S(6)*S(15)*S(22)/BU(1)	70342040
069	C	DETERMINE MOMENT CARRIED BY UPPER COVER, SIDE AND INTERMEDIATE	70342050
070	C	LONGERONS	70342060
071		340 S(12) = S(21) + S(3)*S(6)*S(15)/D(2) + S(5)*S(6)*S(17)/D(2)	70342070
072		S(13) = S(10) - S(12)	70342080
073		IF(S(13)) 400,400,341	70342090
074		341 S(14) = S(13)/S(6)/S(11)	70342100
075		IF(ICST - 2) 345,350,345	70342110
076		345 S(50) = FMAX(1)*S(11)*S(14)	70342120
077		S(57) = (S(50) + S(48))/BPM(50)/D(50)	70342130
078		IF(S(14) - S(57)) 346,346,350	70342140
079		346 S(14) = S(57)	70342150
080		350 IF(S(14) .GT. S(2)) S(2) = S(14)	70342152
081		IF(ICST - 2) 400,351,400	70342154
082		351 IF(RTU(1)) 400,400,353	70342156
083		353 S(13) = S(13)*RTU(1)/BU(1)	70342158
084		S(30) = S(13)/S(6)/D(2)/S(35)**2	70342160
085		IF(S(30) .GT. ALCU(1)) ALCU(1) = S(30)	70342162
086	C	CHECK LOWER HALF	70342160
087		400 S(11) = RTL(1)	70342160
088	C	DETERMINE MOMENT CARRIED BY LOWER COVER, SIDE AND INTERMEDIATE	70342240
089	C	LONGERONS	70342250
090		S(12) = TCU(1)*S(6)*S(10)*BL(1) - S(11)/BL(1) +	70342260
091		10(3)*S(6)*S(11)/D(2) + S(5)*S(6)*S(17)/D(2)	70342270
092		S(13) = S(10) - S(12)	70342280
093		IF(S(13)) 500,500,421	70342290
094		421 S(14) = S(13)/S(6)/S(11)	70342300
095		IF(S(14) .GT. S(4)) S(4) = S(14)	70342310
096		IF(ICST - 2) 500,423,500	70342320
097		423 IF(RTL(1)) 500,500,425	70342330
098		425 S(13) = S(13)*RTL(1)/BL(1)	70342340
099		S(30) = S(13)/S(6)/D(2)/S(37)**2	70342350
100		IF(S(30) .GT. ALCL(1)) ALCL(1) = S(30)	70342360
101	C		70342370
102	C	SETUP SECTION DATA	70342380
103		500 ALU(1) = S(2)	70342390
104		ALS(1) = S(3)	70342400
105		ALL(1) = S(4)	70342410
106		ALT(1) = S(5)	70342420
107	C	TEST FOR STIFFNESS REQUIREMENT	70342430
108	C	DEVELOP STIFFNESS START WITH VERTICAL STIFFNESS	70342440
109		500 I = 1	70342450
110		507 S(26) = S(5)*TCU(1)*D(1) - RTU(1)/BU(1)	70342460
111		S(27) = S(17)*ALT(1)	70342470
112		S(28) = S(15)*ALS(1)	70342480
113		S(30) = ALCU(1)*D(2)*S(35)**2	70342490
114		S(30) = ALCL(1)*D(2)*S(37)**2	70342500
115		IF(ICST - 2) 510,520,510	70342510
116	C	LONGERON CONSTRUCTION	70342520
117		510 S(31) = S(11)*ALU(1)	70342530
118		S(32) = S(12)*ALL(1)	70342540
119		GO TO 530	70342550
120	C	STRINGER CONSTRUCTION	70342560
121		520 S(31) = S(11)*ALU(1)*D(1) - RTU(1)/BU(1)	70342570
122		S(32) = S(12)*ALL(1)*D(1) - RTL(1)/BL(1)	70342580

04/10/74	INPUT LISTING	AUTOFLEX CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	CONTENTS		
003	$S(0) = F(14) * S(20) + F(104) * S(27) + S(20) + S(20) +$		70340000
004	$1 * S(30) + S(31) + S(32)$		70340000
005	$W(11) - 1) 000,000,000$		70340010
006	$S(0) * F(14) - E(17) 040,000,000$		70340020
007	C VERTICAL STIFFNESS LESS THAN REQUIRED STIFFNESS		70340030
008	$040 * S(3) = E(17) - E(14)$		70340040
009	$W(103) - 2) 040,044,042$		70340050
010	C LONGERON CONSTRUCTION		70340060
011	$040 * S(3) = S(33) / 0(2) * F(1104) / S(111)$		70340070
012	$S(30) = S(33) / 0(2) * F(1104) / S(112)$		70340080
013	$ALU(1) = ALU(1) + S(3)$		70340090
014	$ALL(1) = ALL(1) + S(30)$		70340100
015	GO TO 000		70340110
016	$044 * F(174) 040,040,040$		70340120
017	$040 * S(3) = S(33) / 0(2) * F(1104) / S(30) * 2 / 0(2)$		70340130
018	$ALU(1) = ALU(1) + S(3)$		70340140
019	GO TO 047		70340150
040	$040 * S(3) = S(33) / 0(2) * F(1104) / S(111)$		70340160
041	$ALU(1) = ALU(1) + S(3)$		70340170
042	$047 * F(174) 040,040,040$		70340180
043	$040 * S(30) = S(33) / 0(2) * F(1104) / S(37) * 2 / 0(2)$		70340190
044	$ALU(1) = ALU(1) + S(30)$		70340200
045	$040 * S(30) = S(33) / 0(2) * F(1104) / S(112)$		70340210
046	$ALL(1) = ALL(1) + S(30)$		70340220
047	C DEVELOP SIDE BENDING STIFFNESS		70340230
048	C ONE SIDE PANEL ONLY		70340240
049	$000 * S(0) = S(110) / 0(2) * TCS(1)$		70340250
050	$S(27) = S(110) * AT(1)$		70340260
051	$S(20) = ALU(1) * 0(2) * S(62) * 2$		70340270
052	$S(30) = ALU(1) * 0(2) * S(63) * 2$		70340280
053	$S(0) = 0(24)$		70340290
054	$W(103) - 2) 000,000,000$		70340300
055	$000 * S(3) = S(113) * ALU(1)$		70340310
056	$S(20) = S(114) * ALL(1)$		70340320
057	GO TO 070		70340330
058	$000 * S(0) = S(110) * ALU(1)$		70340340
059	$S(3) = S(113) * ALU(1) * (0(1) - RTU(1) / BU(1))$		70340350
060	$S(20) = S(114) * ALL(1) * (0(1) - RTU(1) / BU(1))$		70340360
061	$070 * S(3) = F(14) * S(20) + F(104) * S(27) + S(20) + S(20) +$		70340370
062	$1 * S(30) + S(31) + S(32)$		70340380
063	$W(11) - 1) 071,000,000$		70340390
064	$071 * S(3) = E(104) - E(154)$		70340400
065	$E(154) = E(104)$		70340410
066	$11 = 2$		70340420
067	C SIDE BENDING STIFFNESS LESS THAN REQUIRED STIFFNESS		70340430
068	$W(103) - 2) 070,074,072$		70340440
069	$070 * S(3) = S(33) / 0(2) * F(1104) / S(113)$		70340450
070	$S(30) = S(33) / 0(2) * F(1104) / S(114)$		70340460
071	$ALU(1) = ALU(1) + S(3)$		70340470
072	$ALL(1) = ALL(1) + S(30)$		70340480
073	GO TO 067		70340490
074	$074 * S(3) = S(33) * F(1104) / S(110)$		70340500
075	$ALU(1) = ALU(1) + S(3)$		70340510
076	GO TO 067		70340520
077	C DEVELOP LONGERON HEIGHT PER INCH		70340530
078	$000 * F(103) - 2) 001,000,001$		70340540
079	C LONGERON CONSTRUCTION		70340550
080	$001 * T(15) = (ALU(1) * S(12) / 0(2) + ALL(1) * S(12) / 0(2) + AT(1) * S(13) +$		70340560
081	$1 * ALU(1) * 0(2) + ALU(1) * 0(2) * F(1104))$		70340570
082	GO TO 1000		70340580
083	C STRINGER CONSTRUCTION		70340590
084	C TEST FOR CUTOUTS UPPER AND LOWER		70340600
085	$000 * S(0) = CT(04)$		70340610
086	$W(103) 003,000,000$		70340620
087	$003 * S(0) = - CT(04)$		70340630
088	$000 * F(1543) - 0(1) 000,000,007$		70340640
089	$000 * S(0) = 0(4)$		70340650
090	$007 * F(04) - S(03) 000,000,000$		70340660
091	$000 * S(0) = 0(4)$		70340670
092	$000 * S(0) = CT(04)$		70340680
093	$W(103) 003,070,000$		70340690



09/10/79	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FURLEACE OVERLAY
CARD NO	CONTENTS		
1005	PL(1) = D(5)		70310530
1006	IF (MUL) 70,70,70		70310540
1007	C BASIC - PANEL NOT FILLED		70310550
1008	70 TCU(1) = D(5)		70310560
1009	TCS(1) = D(5)		70310570
1070	TCL(1) = D(5)		70310580
1071	C S(1) = PANEL RIVET FACTOR		70310590
1072	S(1) = D(47)		70310600
1073	GO TO 80		70310610
1074	C PANEL IS FILLED		70310620
1075	75 TCU(1) = D(52)		70310630
1076	TCS(1) = D(52)		70310640
1077	TCL(1) = D(52)		70310650
1078	S(1) = D(1)		70310660
1079	C CALCULATE SHEAR FLOW S(1) = 0 = VQ/I		70310670
1080	80 S(2) = S(11) + S(12) + S(15)		70310680
1081	S(3) = ABS(S(3)) * S(11) / S(2)		70310690
1082	C SETUP INITIAL ALLOWABLE SHEAR STRESS - S(5)		70310700
1083	S(5) = FWP(70) * S(1)		70310710
1084	S(4) = S(3) / S(5)		70310720
1085	IF (S(4) - TCS(1)) 85,80,80		70310730
1086	C INITIAL T-STRENGTH IS LESS THAN T-MINIMUM		70310740
1087	85 S(4) = TCS(1)		70310750
1088	S(5) = S(3) / S(4)		70310760
1089	C DETERMINE PANEL SHEAR BUCKLING CONSTANT KS = S(7)		70310770
1090	88 S(7) = D(44)		70310780
1091	IF (RCS(1)) 100,100,81		70310790
1092	81 S(5) = S(5) * 2 * S(3) * D(1) / S(4)		70310800
1093	IF (D(2) - S(5)) 82,10,10		70310810
1094	82 IF (S(5) - D(1)) 84,84,80		70310820
1095	84 S(7) = D(44) * ((S(5) / D(2)) * EQUA(20))		70310830
1096	GO TO 100		70310840
1097	86 S(7) = EQUA(21) * ((S(5) / D(1)) * EQUA(22))		70310850
1098	C CALCULATE SHEAR BUCKLING CONSTANTS		70310860
1099	C S(4) = KS * 2 * E / (12 * (1 - NU) * 2) / S * 2		70310870
1100	100 S(4) = S(7) * (D(1) * 2) * FWP(80) / D(12) / S(2) / (S(5) * 2)		70310880
1101	C S(6) = FSCR		70310890
1102	S(6) = S(4) * (S(4) * 2)		70310900
1103	C CHECK IF PANEL IS BUCKLED		70310910
1104	TCS(1) = S(4)		70310920
1105	IF (S(6) - S(5)) 150,150,100		70310930
1106	C CHECK POST BUCKLED STRENGTH		70310940
1107	C ASSUME DIAGONAL TENSION ANGLE IS 45 DEGREES		70310950
1108	C THEN S(12) = SIN(BETA) * COS(BETA) = 0.5		70310960
1109	150 S(12) = D(10)		70310970
1110	C FALLOW = FSCR + SIN(BETA) * COS(BETA) * (CR * TU - FSCR)		70310980
1111	S(4) = S(6) + S(12) * (S(1) * FWP(70) - S(6))		70310990
1112	IF (S(4) - S(5)) 151,150,100		70311000
1113	C SOLVE SIMULTANEOUS EQUATION FOR PANEL THICKNESS		70311010
1114	151 S(15) = S(1) / D(2) / D(1) - S(12) / S(4)		70311020
1115	S(16) = S(1) * FWP(70) * S(12) / D(3) / D(1) - S(12) / S(4)		70311030
1116	S(17) = (S(15) * 2 + S(16) * 3) * .5		70311040
1117	S(18) = (S(15) + S(17) * D(2))		70311050
1118	S(19) = (S(17) - S(15) * D(2))		70311060
1119	TCS(1) = S(18) - S(19)		70311070
1120	C TEST LAB FOR EDGE NET SECTION EFFECT		70311080
1121	100 S(20) = S(1) / D(47) / FWP(70)		70311090
1122	IF (S(20) - TCS(1)) 101,102,102		70311100
1123	101 S(20) = TCS(1)		70311110
1124	102 IF (T(5(1) - S(20)) 100,200,200		70311120
1125	100 T(5(1) = S(20)		70311130
1126	C CHECK SECTION FOR PRESSURE LOADING		70311140
1127	200 IF (PRES(1)) 250,201,250		70311150
1128	201 IF (IMP(1)) 250,400,250		70311160
1129	250 CALL CURVES		70311170
1130	C TEST PANEL ELEMENTS TO SEE IF ANY COMPONENTS ARE PRESSURE DESIGNED		70311180
1131	IF (TCU(1) - S(19)) 251,252,252		70311190
1132	251 TCU(1) = S(19)		70311200
1133	252 IF (TLU(1) - S(12)) 253,254,254		70311210
1134	253 TLU(1) = S(12)		70311220
1135	254 IF (TCS(1) - S(18)) 261,262,262		70311230

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	CONTENTS		
1136	001 TCS(1) = S3(16)		70311240
1137	002 IF(TLS(1) - S3(13)) 263,263,270		70311250
1138	003 TLS(1) = S3(13)		70311260
1139	270 IF(TCL(1) - S3(17)) 271,272,272		70311270
1140	271 TCL(1) = S3(17)		70311280
1141	270 IF(TLL(1) - S3(14)) 273,400,400		70311290
1142	273 TLL(1) = S3(14)		70311300
1143	C CHECK FOR LOCAL PANEL FLUTTER		70311310
1144	400 TCF(1) = D(24)		70311320
1145	IF(D(1) - CIND(21)) 401,401,500		70311325
1146	401 S(4) = DFRN(1)/S3(9)		70311330
1147	IF(D(10) - S(4)) 411,412,412		70311340
1148	C L/W IS GREATER THAN 10.0		70311350
1149	411 S(4) = D(10)		70311360
1150	C S(2) = IF(M)E/Q1**333*7/L		70311370
1151	412 S(2) = EQUA(16) - EQUA(17)*S(4) + EQUA(18)*S(4)**2 -		70311380
1152	1EQUA(19)*S(4)**3		70311390
1153	C D(30) = FLUTTER MARGIN		70311400
1154	S(5) = (CIND(25)*CIND(24)/CIND(23)*D(17)**D(21)		70311410
1155	C S3(10) = BASIC FLUTTER THICKNESS		70311420
1156	C ADD PANEL THICKNESS CORRECTION FOR BOUNDARY LAYER EFFECT		70311422
1157	S3(10) = S(2)*DFRN(1)/S(5)*CIND(20)		70311430
1158	S3(10) = S3(10)		70311435
1159	S3(20) = S3(10)		70311440
1160	TCF(1) = S3(10)		70311450
1161	C TEST FOR FLUTTER DESIGN		70311460
1162	IF(TOU(1) - S3(10)) 421,422,422		70311470
1163	421 TOU(1) = S3(10)		70311480
1164	420 IF(TLU(1) - S3(10)) 423,430,430		70311490
1165	423 TLU(1) = S3(10)		70311500
1166	430 IF(TCS(1) - S3(10)) 431,432,432		70311510
1167	431 TCS(1) = S3(10)		70311520
1168	432 IF(TLS(1) - S3(10)) 433,440,440		70311530
1169	433 TLS(1) = S3(10)		70311540
1170	440 IF(TCL(1) - S3(20)) 441,442,442		70311550
1171	441 TCL(1) = S3(20)		70311560
1172	442 IF(TLL(1) - S3(20)) 443,500,500		70311570
1173	443 TLL(1) = S3(20)		70311580
1174	C TEST FOR ACOUSTICS		70311590
1175	000 IF(ACOU(1)) 700,700,801		70311600
1176	C SOUND LEVELS ARE INPUT		70311610
1177	001 S(2) = ACOU(1)/D(13)		70311620
1178	S(3) = EQUA(23)*D(10)**S(2)		70311630
1179	S(4) = (77P(70)*77P(70))**.5		70311640
1180	C S3(11) = EDGE THICKNESS TO RESIST ACOUSTIC FATIGUE		70311650
1181	C S3(10) = MILLED THICKNESS		70311663
1182	C		70311665
1183	C ***** D(70) THRU D(80) ARE CONSTANTS FOR ACOUSTIC EQUATIONS *****		70311666
1184	C		70311667
1185	S3(11) = EQUA(24)*S3(10)*S(3)**.5/S(4)		70311670
1186	C TEST FOR MILLED PANEL		70311673
1187	IF(MIL) 900,900,904		70311675
1188	900 S3(10) = S3(11)		70311683
1189	GO TO 910		70311685
1190	904 S3(10) = S3(11)*EQUA(26)		70311690
1191	C SETUP CURVATURE CORRECTION		70311693
1192	C UPPER PANEL		70311695
1193	S(6 S(7) = D(1)		70311698
1194	IF(RCU(1)) 915,915,912		70311703
1195	S(2 S(6) = S3(10)**2/S3(11)/RCU(1)		70311705
1196	S(7) = D(77)*D(70)*S(6)-D(70)/S(6)-D(80)*ALOG10(S(6))		70311710
1197	C SIDE PANEL		70311713
1198	S(6 S(8) = D(1)		70311715
1199	IF(RCS(1)) 920,920,917		70311720
1200	S(7 S(8) = S3(10)**2/S3(11)/RCS(1)		70311723
1201	S(8) = D(77)*D(70)*S(8)-D(70)/S(8)-D(80)*ALOG10(S(8))		70311728
1202	C LOWER PANEL		70311730
1203	920 S(9) = D(1)		70311733
1204	IF(RCL(1)) 925,925,922		70311735
1205	922 S(9) = S3(10)**2/S3(11)/RCL(1)		70311743
1206	S(9) = D(77)*D(70)*S(9)-D(70)/S(9)-D(80)*ALOG10(S(9))		70311745

CARD NO	INPUT LISTING	CONTENTS	70311000
1207	C	CORRECTED UPPER THICKNESS	70311000
1208		$S(1) = S(1) * S(7)$	70311003
1209		$S(2) = S(10) * S(7)$	70311005
1210	C	CORRECTED SIDE THICKNESS	70311000
1211		$S(3) = S(11) * S(8)$	70311003
1212		$S(4) = S(10) * S(8)$	70311005
1213	C	CORRECTED LOWER THICKNESS	70311070
1214		$S(5) = S(11) * S(9)$	70311073
1215		$S(6) = S(10) * S(9)$	70311075
1216	C	TEST PANEL ELEMENTS TO SEE IF ANY COMPONENTS ARE ACOUSTICALLY DESIGNED	70311000
1217		$S(8) = (S(12) * .07 * TCU(1)) / TCU(1) = S(12)$	70311003
1218		$S(9) = (S(13) * .07 * TLU(1)) / TLU(1) = S(13)$	70311005
1219		$S(10) = (S(14) * .07 * TCS(1)) / TCS(1) = S(14)$	70312000
1220		$S(11) = (S(15) * .07 * TLS(1)) / TLS(1) = S(15)$	70312010
1221		$S(12) = (S(16) * .07 * TCL(1)) / TCL(1) = S(16)$	70312020
1222		$S(13) = (S(17) * .07 * TLL(1)) / TLL(1) = S(17)$	70312030
1223	C	DETERMINE COVER HEIGHT PER UNIT LENGTH (NO GJ NO HOLES)	70312050
1224		$S(2) = S(12) / D(2)$	70312050
1225		$S(3) = D(2)$	70312070
1226		$S(4) = S(2)$	70312080
1227		$S(1) = (S(2) * 2) * 740, 720, 740$	70312090
1228		$S(2) = BL(1) / BSTR(1)$	70312100
1229		$S(3) = BS(1) / BSTR(1)$	70312110
1230		$S(4) = BL(1) / BSTR(1)$	70312120
1231	C	DETERMINE FRAME LAND HEIGHT PER INCH	70312130
1232		$S(5) = (BL(1) * (TLU(1) - TCU(1)) + BS(1) * (TLS(1) - TCS(1)) * D(2) +$	70312140
1233		$BL(1) * (TLL(1) - TCL(1)) * D(50) / BSTR(1) * 740 * 740)$	70312150
1234	C	DETERMINE LONGERON LAND HEIGHT PER INCH	70312160
1235		$S(6) = (S(2) * (TLU(1) - TCU(1)) + S(3) * (TLS(1) - TCS(1)) * D(2) +$	70312170
1236		$BS(1) * (TLL(1) - TCL(1)) * D(50) / BSTR(1) * 740 * 740)$	70312180
1237	C	DETERMINE COVER HEIGHT PER INCH	70312190
1238		$TOT(5) = (BL(1) * TCU(1) + BS(1) * TCS(1)) * D(2) + BL(1) * TCL(1) * D(2)$	70312200
1239		$(FP(7) * S(5) + S(6) * S(5))$	70312210
1240		$S(5) = S(1) / TOT(5)$	70312220
1241		$S(6) = S(1) * (TCS(1) * 2)$	70312230
1242		RETURN	70312240
1243		END	70312250
1244	C		
1245	C	*****	
1246	C	SUBROUTINE FNCB	
1247	C	*****	
1248	C		
1249		SUBROUTINE FNCB	70300010
1250	C	SUPPLY ROUTINE - TO PROVIDE FOR HONEYCOMB PANEL SYNTHESIS	70300020
1251	C		70300030
1252		CORRIN TCON(4400)	70300040
1253	C		70300050
1254		DIMENSION D(2000), T(2000), DC(100), ND(200)	70300060
1255	C		70300070
1256		EQUIVALENCE (D(1), TCON(1)), (T(1), TCON(200)), (DC(1), TCON(410)),	70300080
1257		(ND(1), TCON(420))	70300090
1258	C		70300100
1259		RETURN	70300110
1260		END	70300120
1261	C		
1262	C	*****	
1263	C	SUBROUTINE FPANEL	
1264	C	*****	
1265	C		
1266		SUBROUTINE FPANEL	70300130
1267	C	WRITTEN BY JANUARY 1972	70300140
1268	C	TO SETUP PANEL SYNTHESIS SEAFIN	70300150
1269	C		70300160
1270		CORRIN TCON(4400)	70300170
1271	C		70300180
1272		DIMENSION D(2000), T(2000), DC(100), ND(200)	70300190
1273	C		70300200
1274		DIMENSION CIND(50)	70300210
1275		DIMENSION FPL(20)	70300220
1276		DIMENSION S(100), TOT(20), PER(20), BSTR(20)	70300230
1277		EQUIVALENCE (D(1), TCON(1)), (T(1), TCON(200)), (DC(1), TCON(410)),	70300240

CARD NO	INPUT LISTING	CONTENT	70200100
1270	1 (IND(1),TCOH(4201))		70200100
1270	EQUIVALENCE (D(24),CIND(1))		70200100
1280	EQUIVALENCE (D(30),FRML(1))		70200100
1281	EQUIVALENCE (T(1),S(1),T(20),TOT(1),T(24),PER(1))		70200100
1282	T(100),SFRM(1)		70200100
1283	EQUIVALENCE (IND(101),J1,IND(102),J1,IND(102),ICST), (IND(124),IFRM)		70200100
1284	C		70200100
1285	IFRM = 1		70200200
1286	IF (FRML(1)) 100,100,200		70200210
1287	100 IF (CIND(17)) 101,101,150		70200220
1288	C ERROR MESSAGE		70200230
1289	101 WRITE(6,60)		70200240
1290	60 FORMAT(1H0,10X,3H*** FRAME SPACE DEFINITION ERROR ***		70200250
1291	1//BX,4HGENERAL FRAME SPACING HAS BEEN SET AT 6 INCHES)		70200260
1292	CIND(17) = D(6)		70200270
1293	150 IF (CIND(17) - D(14)) 151,151,152		70200280
1294	C FRAME SPACING AT LOWER LIMIT CHECK FOR SEARCH		70200290
1295	151 SFRM(1) = CIND(17)		70200300
1296	GO TO 300		70200310
1297	C FRAME SPACING IS FIXED		70200320
1298	152 SFRM(1) = CIND(17) - D(14)		70200330
1299	IFRM = 3		70200340
1300	GO TO 400		70200350
1301	200 IF (FRML(1) - D(14)) 201,201,250		70200360
1302	C FRAME SPACING IS AT LOWER LIMIT CHECK AGAINST UPPER LIMIT		70200370
1303	201 SFRM(1) = FRML(1)		70200380
1304	GO TO 300		70200390
1305	C FRAME SPACING IS FIXED		70200400
1306	250 SFRM(1) = FRML(1) - D(14)		70200410
1307	IFRM = 3		70200420
1308	GO TO 400		70200430
1309	C CHECK UPPER LIMIT		70200440
1310	300 S(1) = PER(1)/D(15)+D(35)		70200450
1311	IF (S(1) - SFRM(1)) 301,301,400		70200460
1312	C FRAME SPACING IS GREATER THAN MAXIMUM		70200470
1313	301 SFRM(1) = S(1)		70200480
1314	IFRM = 3		70200490
1315	GO TO 400		70200500
1316	C SETUP SEARCH COUNTER		70200510
1317	C START		70200520
1318	400 IF (ICST - 2) 410,410,420		70200530
1319	C LONGERON OR STRINGER CONSTRUCTION		70200540
1320	410 CALL FCOVER		70200550
1321	GO TO 500		70200560
1322	C MONITOR CONSTRUCTION GROWTH POTENTIAL - BURN ROUTINE		70200570
1323	420 CALL FCHMB		70200580
1324	500 CALL MINFR		70200590
1325	CALL FREQD		70200600
1326	IF (IFRM - 3) 050,1000,1000		70200610
1327	050 IF (IFRM - 2) 051,052,052		70200620
1328	051 IFRM = 2		70200630
1329	TOT(8) = TOT(5) + TOT(6) + TOT(7)		70200640
1330	C INCREMENT FRAME SPACING		70200650
1331	SFRM(1) = SFRM(1) + D(34)		70200660
1332	GO TO 300		70200670
1333	052 TOT(8) = TOT(5) + TOT(6) + TOT(7)		70200680
1334	IF (TOT(8) - TOT(8)) 053,1000,054		70200690
1335	053 TOT(8) = TOT(8)		70200700
1336	SFRM(1) = SFRM(1) + D(34)		70200710
1337	GO TO 300		70200720
1338	054 IFRM = 3		70200730
1339	SFRM(1) = SFRM(1) + D(34)		70200740
1340	GO TO 300		70200750
1341	1000 CONTINUE		70200760
1342	RETURN		70200770
1343	END		70200780
1344	C		
1345	C (C(1),C(2),C(3),C(4),C(5),C(6),C(7),C(8),C(9),C(10),C(11),C(12),C(13),C(14),C(15),C(16),C(17),C(18),C(19),C(20),C(21),C(22),C(23),C(24),C(25),C(26),C(27),C(28),C(29),C(30),C(31),C(32),C(33),C(34),C(35),C(36),C(37),C(38),C(39),C(40),C(41),C(42),C(43),C(44),C(45),C(46),C(47),C(48),C(49),C(50),C(51),C(52),C(53),C(54),C(55),C(56),C(57),C(58),C(59),C(60),C(61),C(62),C(63),C(64),C(65),C(66),C(67),C(68),C(69),C(70),C(71),C(72),C(73),C(74),C(75),C(76),C(77),C(78),C(79),C(80),C(81),C(82),C(83),C(84),C(85),C(86),C(87),C(88),C(89),C(90),C(91),C(92),C(93),C(94),C(95),C(96),C(97),C(98),C(99),C(100),C(101),C(102),C(103),C(104),C(105),C(106),C(107),C(108),C(109),C(110),C(111),C(112),C(113),C(114),C(115),C(116),C(117),C(118),C(119),C(120),C(121),C(122),C(123),C(124),C(125),C(126),C(127),C(128),C(129),C(130),C(131),C(132),C(133),C(134),C(135),C(136),C(137),C(138),C(139),C(140),C(141),C(142),C(143),C(144),C(145),C(146),C(147),C(148),C(149),C(150),C(151),C(152),C(153),C(154),C(155),C(156),C(157),C(158),C(159),C(160),C(161),C(162),C(163),C(164),C(165),C(166),C(167),C(168),C(169),C(170),C(171),C(172),C(173),C(174),C(175),C(176),C(177),C(178),C(179),C(180),C(181),C(182),C(183),C(184),C(185),C(186),C(187),C(188),C(189),C(190),C(191),C(192),C(193),C(194),C(195),C(196),C(197),C(198),C(199),C(200),C(201),C(202),C(203),C(204),C(205),C(206),C(207),C(208),C(209),C(210),C(211),C(212),C(213),C(214),C(215),C(216),C(217),C(218),C(219),C(220),C(221),C(222),C(223),C(224),C(225),C(226),C(227),C(228),C(229),C(230),C(231),C(232),C(233),C(234),C(235),C(236),C(237),C(238),C(239),C(240),C(241),C(242),C(243),C(244),C(245),C(246),C(247),C(248),C(249),C(250),C(251),C(252),C(253),C(254),C(255),C(256),C(257),C(258),C(259),C(260),C(261),C(262),C(263),C(264),C(265),C(266),C(267),C(268),C(269),C(270),C(271),C(272),C(273),C(274),C(275),C(276),C(277),C(278),C(279),C(280),C(281),C(282),C(283),C(284),C(285),C(286),C(287),C(288),C(289),C(290),C(291),C(292),C(293),C(294),C(295),C(296),C(297),C(298),C(299),C(300),C(301),C(302),C(303),C(304),C(305),C(306),C(307),C(308),C(309),C(310),C(311),C(312),C(313),C(314),C(315),C(316),C(317),C(318),C(319),C(320),C(321),C(322),C(323),C(324),C(325),C(326),C(327),C(328),C(329),C(330),C(331),C(332),C(333),C(334),C(335),C(336),C(337),C(338),C(339),C(340),C(341),C(342),C(343),C(344),C(345),C(346),C(347),C(348),C(349),C(350),C(351),C(352),C(353),C(354),C(355),C(356),C(357),C(358),C(359),C(360),C(361),C(362),C(363),C(364),C(365),C(366),C(367),C(368),C(369),C(370),C(371),C(372),C(373),C(374),C(375),C(376),C(377),C(378),C(379),C(380),C(381),C(382),C(383),C(384),C(385),C(386),C(387),C(388),C(389),C(390),C(391),C(392),C(393),C(394),C(395),C(396),C(397),C(398),C(399),C(400),C(401),C(402),C(403),C(404),C(405),C(406),C(407),C(408),C(409),C(410),C(411),C(412),C(413),C(414),C(415),C(416),C(417),C(418),C(419),C(420),C(421),C(422),C(423),C(424),C(425),C(426),C(427),C(428),C(429),C(430),C(431),C(432),C(433),C(434),C(435),C(436),C(437),C(438),C(439),C(440),C(441),C(442),C(443),C(444),C(445),C(446),C(447),C(448),C(449),C(450),C(451),C(452),C(453),C(454),C(455),C(456),C(457),C(458),C(459),C(460),C(461),C(462),C(463),C(464),C(465),C(466),C(467),C(468),C(469),C(470),C(471),C(472),C(473),C(474),C(475),C(476),C(477),C(478),C(479),C(480),C(481),C(482),C(483),C(484),C(485),C(486),C(487),C(488),C(489),C(490),C(491),C(492),C(493),C(494),C(495),C(496),C(497),C(498),C(499),C(500),C(501),C(502),C(503),C(504),C(505),C(506),C(507),C(508),C(509),C(510),C(511),C(512),C(513),C(514),C(515),C(516),C(517),C(518),C(519),C(520),C(521),C(522),C(523),C(524),C(525),C(526),C(527),C(528),C(529),C(530),C(531),C(532),C(533),C(534),C(535),C(536),C(537),C(538),C(539),C(540),C(541),C(542),C(543),C(544),C(545),C(546),C(547),C(548),C(549),C(550),C(551),C(552),C(553),C(554),C(555),C(556),C(557),C(558),C(559),C(560),C(561),C(562),C(563),C(564),C(565),C(566),C(567),C(568),C(569),C(570),C(571),C(572),C(573),C(574),C(575),C(576),C(577),C(578),C(579),C(580),C(581),C(582),C(583),C(584),C(585),C(586),C(587),C(588),C(589),C(590),C(591),C(592),C(593),C(594),C(595),C(596),C(597),C(598),C(599),C(600),C(601),C(602),C(603),C(604),C(605),C(606),C(607),C(608),C(609),C(610),C(611),C(612),C(613),C(614),C(615),C(616),C(617),C(618),C(619),C(620),C(621),C(622),C(623),C(624),C(625),C(626),C(627),C(628),C(629),C(630),C(631),C(632),C(633),C(634),C(635),C(636),C(637),C(638),C(639),C(640),C(641),C(642),C(643),C(644),C(645),C(646),C(647),C(648),C(649),C(650),C(651),C(652),C(653),C(654),C(655),C(656),C(657),C(658),C(659),C(660),C(661),C(662),C(663),C(664),C(665),C(666),C(667),C(668),C(669),C(670),C(671),C(672),C(673),C(674),C(675),C(676),C(677),C(678),C(679),C(680),C(681),C(682),C(683),C(684),C(685),C(686),C(687),C(688),C(689),C(690),C(691),C(692),C(693),C(694),C(695),C(696),C(697),C(698),C(699),C(700),C(701),C(702),C(703),C(704),C(705),C(706),C(707),C(708),C(709),C(710),C(711),C(712),C(713),C(714),C(715),C(716),C(717),C(718),C(719),C(720),C(721),C(722),C(723),C(724),C(725),C(726),C(727),C(728),C(729),C(730),C(731),C(732),C(733),C(734),C(735),C(736),C(737),C(738),C(739),C(740),C(741),C(742),C(743),C(744),C(745),C(746),C(747),C(748),C(749),C(750),C(751),C(752),C(753),C(754),C(755),C(756),C(757),C(758),C(759),C(760),C(761),C(762),C(763),C(764),C(765),C(766),C(767),C(768),C(769),C(770),C(771),C(772),C(773),C(774),C(775),C(776),C(777),C(778),C(779),C(780),C(781),C(782),C(783),C(784),C(785),C(786),C(787),C(788),C(789),C(790),C(791),C(792),C(793),C(794),C(795),C(796),C(797),C(798),C(799),C(800),C(801),C(802),C(803),C(804),C(805),C(806),C(807),C(808),C(809),C(810),C(811),C(812),C(813),C(814),C(815),C(816),C(817),C(818),C(819),C(820),C(821),C(822),C(823),C(824),C(825),C(826),C(827),C(828),C(829),C(830),C(831),C(832),C(833),C(834),C(835),C(836),C(837),C(838),C(839),C(840),C(841),C(842),C(843),C(844),C(845),C(846),C(847),C(848),C(849),C(850),C(851),C(852),C(853),C(854),C(855),C(856),C(857),C(858),C(859),C(860),C(861),C(862),C(863),C(864),C(865),C(866),C(867),C(868),C(869),C(870),C(871),C(872),C(873),C(874),C(875),C(876),C(877),C(878),C(879),C(880),C(881),C(882),C(883),C(884),C(885),C(886),C(887),C(888),C(889),C(890),C(891),C(892),C(893),C(894),C(895),C(896),C(897),C(898),C(899),C(900),C(901),C(902),C(903),C(904),C(905),C(906),C(907),C(908),C(909),C(910),C(911),C(912),C(913),C(914),C(915),C(916),C(917),C(918),C(919),C(920),C(921),C(922),C(923),C(924),C(925),C(926),C(927),C(928),C(929),C(930),C(931),C(932),C(933),C(934),C(935),C(936),C(937),C(938),C(939),C(940),C(941),C(942),C(943),C(944),C(945),C(946),C(947),C(948),C(949),C(950),C(951),C(952),C(953),C(954),C(955),C(956),C(957),C(958),C(959),C(960),C(961),C(962),C(963),C(964),C(965),C(966),C(967),C(968),C(969),C(970),C(971),C(972),C(973),C(974),C(975),C(976),C(977),C(978),C(979),C(980),C(981),C(982),C(983),C(984),C(985),C(986),C(987),C(988),C(989),C(990),C(991),C(992),C(993),C(994),C(995),C(996),C(997),C(998),C(999),C(1000),C(1001),C(1002),C(1003),C(1004),C(1005),C(1006),C(1007),C(1008),C(1009),C(1010),C(1011),C(1012),C(1013),C(1014),C(1015),C(1016),C(1017),C(1018),C(1019),C(1020),C(1021),C(1022),C(1023),C(1024),C(1025),C(1026),C(1027),C(1028),C(1029),C(1030),C(1031),C(1032),C(1033),C(1034),C(1035),C(1036),C(1037),C(1038),C(1039),C(1040),C(1041),C(1042),C(1043),C(1044),C(1045),C(1046),C(1047),C(1048),C(1049),C(1050),C(1051),C(1052),C(1053),C(1054),C(1055),C(1056),C(1057),C(1058),C(1059),C(1060),C(1061),C(1062),C(1063),C(1064),C(1065),C(1066),C(1067),C(1068),C(1069),C(1070),C(1071),C(1072),C(1073),C(1074),C(1075),C(1076),C(1077),C(1078),C(1079),C(1080),C(1081),C(1082),C(1083),C(1084),C(1085),C(1086),C(1087),C(1088),C(1089),C(1090),C(1091),C(1092),C(1093),C(1094),C(1095),C(1096),C(1097),C(1098),C(1099),C(1100),C(1101),C(1102),C(1103),C(1104),C(1105),C(1106),C(1107),C(1108),C(1109),C(1110),C(1111),C(1112),C(1113),C(1114),C(1115),C(1116),C(1117),C(1118),C(1119),C(1120),C(1121),C(1122),C(1123),C(1124),C(1125),C(1126),C(1127),C(1128),C(1129),C(1130),C(1131),C(1132),C(1133),C(1134),C(1135),C(1136),C(1137),C(1138),C(1139),C(1140),C(1141),C(1142),C(1143),C(1144),C(1145),C(1146),C(1147),C(1148),C(1149),C(1150),C(1151),C(1152),C(1153),C(1154),C(1155),C(1156),C(1157),C(1158),C(1159),C(1160),C(1161),C(1162),C(1163),C(1164),C(1165),C(1166),C(1167),C(1168),C(1169),C(1170),C(1171),C(1172),C(1173),C(1174),C(1175),C(1176),C(1177),C(1178),C(1179),C(1180),C(1181),C(1182),C(1183),C(1184),C(1185),C(1186),C(1187),C(1188),C(1189),C(1190),C(1191),C(1192),C(1193),C(1194),C(1195),C(1196),C(1197),C(1198),C(1199),C(1200),C(1201),C(1202),C(1203),C(1204),C(1205),C(1206),C(1207),C(1208),C(1209),C(1210),C(1211),C(1212),C(1213),C(1214),C(1215),C(1216),C(1217),C(1218),C(1219),C(1220),C(1221),C(1222),C(1223),C(1224),C(1225),C(1226),C(1227),C(1228),C(1229),C(1230),C(1231),C(1232),C(1233),C(1234),C(1235),C(1236),C(1237),C(1238),C(1239),C(1240),C(1241),C(1242),C(1243),C(1244),C(1245),C(1246),C(1247),C(1248),C(1249),C(1250),C(1251),C(1252),C(1253),C(1254),C(1255),C(1256),C(1257),C(1258),C(1259),C(1260),C(1261),C(1262),C(1263),C(1264),C(1265),C(1266),C(1267),C(1268),C(1269),C(1270),C(1271),C(1272),C(1273),C(1274),C(1275),C(1276),C(1277),C(1278),C(1279),C(1280),C(1281),C(1282),C(1283),C(1284),C(1285),C(1286),C(1287),C(1288),C(1289),C(1290),C(1291),C(1292),C(1293),C(1294),C(1295),C(1296),C(1297),C(1298),C(1299),C(1300),C(1301),C(1302),C(1303),C(1304),C(1305),C(1306),C(1307),C(1308),C(1309),C(1310),C(1311),C(1312),C(1313),C(1314),C(1315),C(1316),C(1317),C(1318),C(1319),C(1320),C(1321),C(1322),C(1323),C(1324),C(1325),C(1326),C(1327),C(1328),C(1329),C(1330),C(1331),C(1332),C(1333),C(1334),C(1335),C(1336),C(1337),C(1338),C(1339),C(1340),C(1341),C(1342),C(1343),C(1344),C(1345),C(1346),C(1347),C(1348),C(1349),C(1350),C(1351),C(1352),C(1353),C(1354),C(1355),C(1356),C(1357),C(1358),C(1359),C(1360),C(1361),C(1362),C(1363),C(1364),C(1365),C(1366),C(1367),C(1368),C(1369),C(1370),C(1371),C(1372),C(1373),C(1374),C(1375),C(1376),C(1377),C(1378),C(1379),C(1380),C(1381),C(1382),C(1383),C(1384),C(1385),C(1386),C(1387),C(1388),C(1389),C(1390),C(1391),C(1392),C(1393),C(1394),C(1395),C(1396),C(1397		



04/10/74	INPUT LISTING	AUTOFLON CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
1349		SUBROUTINE FUSHL	70000010
1350	C		70000020
1351		CONVON TCON(400)	70000030
1352		CONVON IPRINT/ IP(00)	
1353	C		70000040
1354		DIMENSION D(2000),T(2000),DC(100),ND(200)	70000050
1355		DIMENSION CIND(50)	70000060
1356		DIMENSION BLND(20)	70000070
1357		DIMENSION MTK(20)	70000080
1358		DIMENSION SH(20)	70000090
1359		DIMENSION SUPH(100)	70000100
1360	C		70000110
1361		EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(410)),	70000120
1362		(ND(1),TCON(420))	70000130
1363		EQUIVALENCE (D(2),CIND(1))	70000140
1364		EQUIVALENCE (D(3),BLND(1))	70000150
1365		EQUIVALENCE (T(10),SH(1)),(SH(1),FD)	70000160
1366		EQUIVALENCE (T(103),MTK(1))	70000170
1367		EQUIVALENCE (TCON(400),SUPH(1))	70000180
1368		EQUIVALENCE (ND(10),I),(ND(102),J),(ND(103),K),(ND(106),N)	70000190
1369		EQUIVALENCE (ND(111),NC),(ND(112),NC)	70000200
1370	C		70000210
1371	C	CLEAR HEIGHT SUMMARY REGION	70000220
1372		DO 2 I=1,100	70000230
1373		SUPH(I) = D(24)	70000240
1374		2 CONTINUE	70000250
1375	C	CLEAR BALLHEAD HEIGHT AREA	70000260
1376		J = NC + 1	70000270
1377		DO 5 I=1,J	70000280
1378		MTK(I) = D(24)	70000290
1379		5 CONTINUE	70000300
1380		CALL CUTOBT	
1381	C	CLEAR SCRATCH REGION	70000310
1382		DO 10 J=1,200	70000320
1383		T(J) = D(24)	70000330
1384		10 CONTINUE	70000340
1385		DO 100 I=1,NC	70000350
1386	C	SET UP SECTION 1 LOADS AND MATERIAL DATA	70000360
1387		CALL LOCK	70000370
1388	C	SET UP FRAME DEPTH	70000380
1389		FD = CIND(10)	70000390
1390	C	CHECK SHAPE	70000400
1391		IF (NC - 2) 40,40,50	70000410
1392	C	ROUNDED RECTANGLE SHAPES	70000420
1393		40 CALL SJOED	70000430
1394		GO TO 70	70000440
1395	C	SUPPLY ROUTINE FOR ELLIPTICAL SHAPES	70000450
1396		50 CALL SJOED	70000460
1397	C	START SHELL SYNTHESIS	70000470
1398		70 CALL LENS	70000480
1399		IF (BLND(1)) 91,91,90	70000490
1400		90 CALL BLANDS	70000500
1401		91 CONTINUE	70000510
1402	C	*** BREAKPOINT OUTPUT ***	70000520
1403		IF (IP(70) 70001,0001,0002	
1404		0001 CONTINUE	
1405		WRITE(6,50) I	70000530
1406		50 FORMAT(1H1,2X,4H*** BREAKPOINT OUTPUT - SUBROUTINE FUSHL ***,	70000540
1407		I 2X,21H** FUSHL - IP(70) ****	
1408		I 2X,70SECTION,13/ 2X,ENT-REGION)	
1409		DO 90 N=1,200,5	70000550
1410		K = N*4	70000560
1411		WRITE(6,57) N, T(J), J=N, K, I	70000570
1412		57 FORMAT(4X,13,6F10.4)	70000580
1413		90 CONTINUE	70000590
1414		0002 CONTINUE	
1415		100 CONTINUE	70000600
1416	C	DEVELOP SHELL HEIGHTS	70000610
1417		CALL FUEIGN	70000620
1418		CALL PART17	70000630
1419		CALL MISCNT	70000640

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSILADE OVERLAY
CARD NO	****	CONTENTS	****
1420	CALL SECOST		70320670
1421	CALL MTDIST		70320680
1422	CALL SUPPLY		70320690
1423	C PRINT OUTPUT		70320700
1424	CALL SPRINT		70320710
1425	RETURN		70320720
1426	END		70320730
1427	C		
1428	C	*****	
1429	C	SUBROUTINE FME10H	
1430	C	*****	
1431	C		
1432		SUBROUTINE FME10H	7032
1433	C		70320020
1434		COMMON TCOM(4400)	70320030
1435	C		70320040
1436		DIMENSION D(2000),T(2000),DC(100),ND(200)	70320050
1437		DIMENSION C(ND(50),EQUA(160)	70320060
1438		DIMENSION ND(20),CTOU(20),CTOL(20),CTOS(20)	70320070
1439		DIMENSION SC,T(100)	70320080
1440		DIMENSION MLCU(20),MLCL(20)	70320090
1441		DIMENSION ALCU(20),ALCL(20)	70320100
1442		DIMENSION S(100),SI(20)	70320110
1443		DIMENSION BU(20),BL(20),BS(20),NBAR(20),DELX(20),SF(20),PER(20)	70320120
1444		DIMENSION TCU(20),TCS(20),TCL(20),TLU(20),TLS(20),TLL(20)	70320130
1445		DIMENSION TOLJ(20),TOJA(20)	70320140
1446		DIMENSION ALU(20),ALS(20),ALL(20),AIT(20)	70320150
1447		DIMENSION SFRH(20),BSTR(20),FRMT(20),FHP(300)	70320160
1448		DIMENSION MTCU(20),MTC(20),MTCL(20),MTCT(20)	70320170
1449		DIMENSION MTLU(20),MTLS(20),MTLL(20),MTST(20),MTLT(20)	70320180
1450		DIMENSION MTHF(20),MTJS(20)	70320190
1451		DIMENSION COCO(20),COLO(20),CONF(20),COJS(20)	70320200
1452	C		70320210
1453		EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(410)),	70320220
1454		(ND(1),TCOM(420))	70320230
1455		EQUIVALENCE (D(81),EQUA(1)),(D(24),C(ND(1))	70320240
1456		EQUIVALENCE (D(36),ND(1)),(D(46),CTOU(1)),(D(48),CTOL(1)),	70320250
1457		(D(50),CTOS(1))	70320260
1458		EQUIVALENCE (D(82),SCST(1)),(SCST(8),RONS), (SCST(9),ROTC)	70320270
1459		EQUIVALENCE (D(158),ALCU(1)),(D(161),ALCL(1))	70320280
1460		EQUIVALENCE (D(163),MLCU(1)),(D(165),MLCL(1))	70320290
1461		EQUIVALENCE (T(1),S(1)),(T(10),SI(1))	70320300
1462		EQUIVALENCE (T(30),BU(1)),(T(32),BL(1)),(T(34),BS(1)),	70320310
1463		(T(36),NBAR(1)),(T(38),DELX(1)),(T(40),SF(1)),(T(44),PER(1))	70320320
1464		EQUIVALENCE (T(62),TCU(1)),(T(64),TCS(1)),(T(66),TCL(1)),	70320330
1465		(T(68),TLU(1)),(T(70),TLS(1)),(T(72),TLL(1))	70320340
1466		EQUIVALENCE (T(76),TOLJ(1)),(T(78),TOJA(1))	70320350
1467		EQUIVALENCE (T(80),ALU(1)),(T(82),ALL(1)),(T(84),ALS(1)),	70320360
1468		(T(86),AIT(1))	70320370
1469		EQUIVALENCE (T(88),SFRH(1)),(T(92),BSTR(1)),(T(94),FRMT(1)),	70320380
1470		(T(120),FHP(1))	70320390
1471		EQUIVALENCE (T(158),MTCU(1)),(T(162),MTC(1)),(T(164),MTCL(1)),	70320400
1472		(T(166),MTCT(1))	70320410
1473		EQUIVALENCE (T(168),MTLU(1)),(T(170),MTLS(1)),(T(172),MTLL(1)),	70320420
1474		(T(174),MTST(1)),(T(176),MTLT(1))	70320430
1475		EQUIVALENCE (T(180),MTHF(1)),(T(170),MTJS(1))	70320440
1476		EQUIVALENCE (T(172),COCO(1)),(T(174),COLO(1)),	70320450
1477		(T(176),CONF(1)),(T(178),COJS(1))	70320460
1478		EQUIVALENCE (ND(10),J), (ND(102),J)	70320470
1479		EQUIVALENCE (ND(11),NC), (ND(122),ICST)	70320480
1480	C		70320490
1481		MTCU(1) = D(24)	70320500
1482		MTC(1) = D(24)	70320510
1483		MTCL(1) = D(24)	70320520
1484		MTCT(1) = D(24)	70320530
1485		MTLU(1) = D(24)	70320540
1486		MTLS(1) = D(24)	70320550
1487		MTLL(1) = D(24)	70320560
1488		MTST(1) = D(24)	70320570
1489		ALCU(1) = D(24)	70320580
1490		MLCL(1) = D(24)	70320590

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INPUT LISTING

AUTOFLOW CHART SET - SHEEP

SECOND FURLEAGE OVERLAY

CARD NO	CONTENTS	7000000
1401	MTL7(1) = 0(24)	7000000
1402	MTW(1) = 0(24)	7000010
1403	MTOUNC(1) = 0(24)	7000020
1404	MTCS(1) = 0(24)	7000030
1405	MTCL(1) = 0(24)	7000040
1406	MTCT(1) = 0(24)	7000050
1407	MTLJ(1) = 0(24)	7000060
1408	MTLS(1) = 0(24)	7000070
1409	MTLL(1) = 0(24)	7000080
1410	MTST(1) = 0(24)	7000090
1411	ALOUNC(1) = 0(24)	7000100
1412	ALCL(1) = 0(24)	7000110
1413	MTL7(1) = 0(24)	7000120
1414	MTW(1) = 0(24)	7000130
1415	S(2) = S(12)/0(2)	7000140
1416	S(4) = 0(24)	7000150
1417	S(5) = S(3)	7000160
1418	IF(100) 10,10,100	7000170
1419	C THERE IS NO MORE RADOME CALCULATE MORE SECTION HEIGHT	7000180
1420	10 S(1) = 0(11)/DELX(1)	7000190
1421	S(2) = S(1)/PER(1)	7000200
1422	IF(100) 2) 20,10,20	7000210
1423	C STRUTTER CONSTRUCTION	7000220
1424	15 S(3) = 0(11)/BSTR(1)*S(2)	7000230
1425	S(4) = 0(11)/BSTR(1)*S(2)	7000240
1426	S(5) = 0(11)/BSTR(1)*S(2)	7000250
1427	C DETERMINE FRAME LAND VOLUME	7000260
1428	20 S(6) = 0(11)*TLU(1) - TCU(1)*S(2)*0(40)*DELX(1)/BTRN(1)	7000270
1429	S(7) = 0(11)*TLB(1) - TCS(1)*S(2)*0(40)*DELX(1)/BTRN(1)	7000280
1430	S(8) = 0(11)*TLL(1) - TCL(1)*S(2)*0(40)*DELX(1)/BTRN(1)	7000290
1431	C DETERMINE LONGERON LAND VOLUME	7000300
1432	S(9) = S(3)*TLU(1) - TCU(1)*0(50)*DELX(1)	7000310
1433	S(10) = S(4)*TLB(1) - TCS(1)*0(50)*DELX(1)	7000320
1434	S(11) = S(5)*TLL(1) - TCL(1)*0(50)*DELX(1)	7000330
1435	C DETERMINE COVER COMPONENT HEIGHT	7000340
1436	MTOUN(1) = (TCU(1)*0(11)*DELX(1)*S(2) + S(6) + S(9))*77P(7)	7000350
1437	MTCS(1) = (TCS(1)*0(11)*DELX(1)*S(2) + S(7) + S(10))*77P(7)	7000360
1438	MTCL(1) = (TCL(1)*0(11)*DELX(1)*S(2) + S(8) + S(11))*77P(7)	7000370
1439	MTCT(1) = MTOUN(1) + MTCS(1) + MTCL(1)	7000380
1440	S(12) = 0(12)*S(2) - 0(1)	7000390
1441	COCD(1) = 10(1) - DELX(1)/0(3)*0(12)*S(12) + 0(11)/0(12) + 0(1)	7000400
1442	C DETERMINE LONGITUDINAL MEMBER HEIGHTS	7000410
1443	MTLJ(1) = ALJ(1)*S(3)*DELX(1)*77P(10)	7000420
1444	MTLS(1) = ALS(1)*S(4)*DELX(1)*77P(10)	7000430
1445	MTLL(1) = ALL(1)*S(5)*DELX(1)*77P(10)	7000440
1446	C DETERMINE STIFFENER HEIGHTS	7000450
1447	MTST(1) = AST(1)*S(3)*DELX(1)*77P(10)	7000460
1448	ALOUN(1) = ALOUN(1)*0(2)*DELX(1)*77P(10)	7000470
1449	ALCL(1) = ALCL(1)*0(2)*DELX(1)*77P(10)	7000480
1450	COCD(1) = COCD(1)	7000490
1451	IF(100) 2) 30,40,30	7000500
1452	30 COCD(1) = 10(1) - DELX(1)/0(2)	7000510
1453	40 MTL7(1) = MTLJ(1) + MTLB(1) + MTL(1) + MTST(1) + ALOUN(1) +	7000520
1454	1 ALCL(1)	7000530
1455	C DETERMINE RINER FRAME HEIGHT	7000540
1456	MTW(1) = FRM(1)*DELX(1)/BTRN(1)*S(2)	7000550
1457	COCD(1) = COCD(1)	7000560
1458	C 80 SUBSEQUENT SECTION	7000570
1459	100 80 100 1-0,AC	7000580
1460	IF(DELX(1) - 0(12)) 101,101,200	7000590
1461	C SHARP DISCONTINUITY - REFLECT LAND AND CUTOUT EFFECTS	7000600
1462	101 MTOUN(1) = TCU(1)*0(11)*DELX(1)*77P(7)	7000610
1463	MTCS(1) = TCS(1)*0(11)*DELX(1)*77P(7)	7000620
1464	MTCL(1) = TCL(1)*0(11)*DELX(1)*77P(7)	7000630
1465	MTCT(1) = MTOUN(1) + MTCS(1) + MTCL(1)	7000640
1466	COCD(1) = 10(1)	7000650
1467	IF(100) 2) 110,105,110	7000660
1468	C STRUTTERS	7000670
1469	105 S(3) = 0(11)/BSTR(1)	7000680
1470	S(4) = 0(11)/BSTR(1)	7000690
1471	S(5) = 0(11)/BSTR(1)	7000700

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	***	CONTENTS	***
1062	110 MTLU(1) = ALU(1)*S(1)*DELX(1)*WTP(101)		70301330
1063	MTLS(1) = ALS(1)*S(1)*DELX(1)*D(2)*WTP(101)		70301340
1064	MTLL(1) = ALL(1)*S(1)*DELX(1)*WTP(101)		70301350
1065	MTST(1) = ATF(1)*S(1)*DELX(1)*WTP(101)		70301360
1066	MTLY(1) = MTLU(1) + MTLS(1) + MTLL(1) + MTST(1)		70301370
1067	MLCU(1) = ALCU(1)*D(2)*DELX(1)*WTP(101)		70301380
1068	MLCL(1) = ALCL(1)*D(2)*DELX(1)*WTP(101)		70301390
1069	COL0(1) = REAR(1)		70301400
1070	MTLY(1) = MTLU(1) + MTLS(1) + MTLL(1) + MTST(1) + MLCU(1) +		70301410
1071	MLCL(1)		70301420
1072	WTP(1) = FRMT(1)*DELX(1)/SFPH(1)		70301430
1073	COMP(1) = REAR(1)		70301440
1074	GO TO 500		70301450
1075	C GENERAL GEOMETRIC TRANSITION		70301460
1076	C *** DO UPPER PANEL ***		70301470
1077	200 S(7) = CTQU(1-1)		70301480
1078	S(8) = CTQU(1)		70301490
1079	IF(CTQU(1)) 201,201,210		70301500
1080	201 S(7) = D(24)		70301510
1081	S(8) = D(24)		70301520
1082	GO TO 230		70301530
1083	210 IF(S(8) - D(1)) 211,211,212		70301540
1084	211 S(8) = BU(1)		70301550
1085	212 IF(BU(1) - S(8)) 213,213,215		70301560
1086	213 S(8) = BU(1)		70301570
1087	215 IF(CTQU(1-1)) 216,230,220		70301580
1088	216 S(7) = - CTQU(1-1)		70301590
1089	220 IF(S(7) - D(1)) 222,222,224		70301600
1090	222 S(7) = BU(1-1)		70301610
1091	224 IF(BU(1-1) - S(7)) 226,230,230		70301620
1092	226 S(7) = BU(1-1)		70301630
1093	230 S(8) = BU(1-1) - S(7)		70301640
1094	S(10) = BU(1) - S(8)		70301650
1095	S(11) = S(12)/D(2)		70301660
1096	S(12) = S(11)		70301670
1097	IF(1CST - 2) 240,235,240		70301680
1098	235 S(11) = S(8)/BSTR(1-1)		70301690
1099	S(12) = S(10)/BSTR(1)		70301700
1000	C DETERMINE VOLUME COVER PER UNITLENGTH		70301710
1001	240 S(24) = TCU(1-1)		70301720
1002	S(25) = TLU(1-1)		70301730
1003	S(26) = TCU(1)		70301740
1004	S(27) = TLU(1)		70301750
1005	IF(TQJAI(1-1) .GT. TCU(1-1)) S(24) = TQJAI(1-1)		70301760
1006	IF(TQJAI(1-1) .GT. TLU(1-1)) S(25) = TQJAI(1-1)		70301770
1007	IF(TQJF(1) .GT. TCU(1)) S(26) = TQJF(1)		70301780
1008	IF(TQJF(1) .GT. TLU(1)) S(27) = TQJF(1)		70301790
1009	S(15) = S(24)*S(8) + (S(25) - S(24))*(S(8)*D(4B)/SFPH(1-1) +		70301800
1010	S(11)*D(50))		70301810
1011	S(16) = S(26)*S(10) + (S(27) - S(26))*(S(10)*D(4B)/SFPH(1) +		70301820
1012	S(12)*D(50))		70301830
1013	MTCU(1) = (S(15) + S(16))/D(2)*DELX(1)*WTP(71)		70301840
1014	S(21) = D(24)		70301850
1015	IF(MTCU(1)) 250,250,245		70301860
1016	245 S(21) = MD(1) - DELX(1)/D(3)*D(2)*S(15) + S(16)/(S(15) + S(16))		70301870
1017	250 S(17) = ALU(1-1)*S(11)		70301880
1018	S(18) = ALU(1)*S(12)		70301890
1019	MTLU(1) = (S(17) + S(18))/D(2)*DELX(1)*WTP(101)		70301900
1020	S(31) = D(24)		70301910
1021	IF(MTLU(1)) 253,253,251		70301920
1022	251 S(31) = MD(1) - DELX(1)/D(3)*D(2)*S(17) + S(18)/(S(17) + S(18))		70301930
1023	253 CONTINUE		70301940
1024	C *** DO SIDE PANEL ***		70301950
1025	C RALE OF TRAP CUTOUT SIDE PENALTY IS EQUAL TO 4 TIMES MATERIAL		70301960
1026	C REMOVED		70301970
1027	S(7) = CTOS(1-1)		70301980
1028	S(8) = CTOS(1)		70301990
1029	IF(CTOS(1)) 301,301,310		70302000
1030	301 S(7) = D(24)		70302010
1031	S(8) = D(24)		70302020
1032	GO TO 330		70302030

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEET	SECOND FUELBASE OVERLAY
CARD NO	****	CONTENTS	****
1033	310 B*(CT001-1) 310,330,330		7030040
1034	310 S(7) = - CT001-1		7030000
1035	330 S(0) = S(1-1) - S(7)		7030000
1036	S(10) = S(1) - S(0)		7030070
1037	S(11) = S(2)		7030000
1038	S(12) = S(2)		7030000
1039	S(13) = S(2)		7030100
1040	S(14) = S(2)		7030110
1041	B*(1007 - 2) 340,330,340		7030210
1042	330 S(11) = S(0)/BSTR(1-1)		7030210
1043	S(12) = S(10)/BSTR(1)		70302140
1044	S(13) = S(1-1)/BSTR(1-1)		70302100
1045	S(14) = S(1)/BSTR(1)		70302100
1046	C DETERMINE VOLUME COVER PER UNIT LENGTH		70302170
1047	340 S(24) = TCS(1-1)		70302100
1048	S(25) = TCS(1-1)		70302100
1049	S(26) = TCS(1)		70302000
1050	S(27) = TCS(1)		7030210
1051	B*(TOLAM(1-1) .07, TCS(1-1) S(24) = TOLAM(1-1)		70302000
1052	B*(TOLAM(1-1) .07, TCS(1-1) S(25) = TOLAM(1-1)		7030270
1053	B*(TOLAM(1-1) .07, TCS(1) S(26) = TOLAM(1)		7030270
1054	B*(TOLAM(1-1) .07, TCS(1) S(27) = TOLAM(1)		70302000
1055	S(15) = S(24)*S(1-1) + (S(25) - S(24))*S(1-1)*S(14)/BTRN(1-1)		70302000
1056	I S(11)*S(15)		7030270
1057	S(16) = S(26)*S(1) + (S(27) - S(26))*S(1)*S(14)/BTRN(1)		70302000
1058	I S(12)*S(16)		70302000
1059	MTC(1) = (S(15) + S(16))/S(2)*DELX(1)*S(2)*TYP(7)		70302700
1060	I (S(15)*S(7)/S(1-1) + S(16)*S(1)/S(1-1)*S(2)*DELX(1)*S(2)*TYP(7))/TOLAM(1-1)		70302710
1061	S(28) = MTC(1) - DELX(1)/S(3)*S(2)*S(15) + S(16)/S(15) + S(16)		70302700
1062	S(17) = ALS(1-1)*S(13)		70302730
1063	S(18) = ALS(1)*S(14)		70302740
1064	MTC(1) = (S(17) + S(18))*DELX(1)*TYP(10)		70302700
1065	S(29) = S(24)		70302700
1066	B*(MTC(1)) 400,400,200		70302770
1067	300 S(28) = MTC(1) - DELX(1)/S(3)*S(2)*S(17) + S(18)/S(17) + S(18)		70302700
1068	C *** DO LOWER PANEL ***		70302700
1069	400 S(7) = CTOL(1-1)		70302400
1070	S(0) = CTOL(1)		70302410
1071	B*(CTOL(1)) 401,401,410		70302400
1072	401 S(7) = S(24)		70302430
1073	S(0) = S(24)		70302440
1074	00 TO 430		70302400
1075	410 B*(1040) - S(1) 411,411,412		70302400
1076	411 S(0) = S(1)		70302470
1077	412 B*(411) - S(0) 414,415,415		70302400
1078	414 S(0) = S(1)		70302400
1079	415 B*(CTOL(1-1)) 416,430,430		70302500
1080	416 S(7) = - CTOL(1-1)		70302510
1081	430 B*(1047) - S(1) 432,432,434		70302500
1082	432 S(7) = S(1-1)		70302530
1083	434 B*(411-1) - S(7) 436,436,436		70302540
1084	436 S(7) = S(1-1)		70302500
1085	438 S(0) = S(1-1) - S(7)		70302000
1086	S(10) = S(1) - S(0)		70302570
1087	S(11) = S(12)/S(2)		70302000
1088	S(12) = S(11)		70302000
1089	B*(1007 - 2) 440,430,440		70302000
1090	435 S(11) = S(0)/BSTR(1-1)		70302010
1091	S(12) = S(10)/BSTR(1)		70302000
1092	C DETERMINE VOLUME COVER PER UNIT LENGTH		70302030
1093	440 S(24) = TCS(1-1)		70302040
1094	S(25) = TCS(1-1)		70302000
1095	S(26) = TCS(1)		70302000
1096	S(27) = TCS(1)		70302070
1097	B*(TOLAM(1-1) .07, TCS(1-1) S(24) = TOLAM(1-1)		70302000
1098	B*(TOLAM(1-1) .07, TCS(1-1) S(25) = TOLAM(1-1)		70302000
1099	B*(TOLAM(1-1) .07, TCS(1) S(26) = TOLAM(1)		70302700
1700	B*(TOLAM(1-1) .07, TCS(1) S(27) = TOLAM(1)		70302710
1701	S(15) = S(24)*S(1) + (S(25) - S(24))*S(1)*S(14)/BTRN(1-1)		70302700
1702	I S(11)*S(15)		70302730
1703	S(16) = S(26)*S(1) + (S(27) - S(26))*S(1)*S(14)/BTRN(1)		70302740

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
1704		$S(12) * D(10) +$	70382750
1705		$MTCL(1) = (S(15) + S(16) / D(2) * DELX(1) * P(7))$	70382760
1706		$S(23) = D(2)$	70382770
1707		$IF(MTCL(1)) 450,450,445$	70382780
1708		$445 S(23) = X(1) - DELX(1) / D(3) * D(2) * S(15) + S(16) / (S(15) + S(16))$	70382790
1709		$450 S(17) = ALL(1) * S(11)$	70382800
1710		$S(18) = ALL(1) * S(12)$	70382810
1711		$MTLL(1) = (S(17) + S(18) / D(2) * DELX(1) * P(10))$	70382820
1712		$S(33) = D(2)$	70382830
1713		$IF(MTLL(1)) 453,453,451$	70382840
1714		$451 S(33) = X(1) - DELX(1) / D(3) * D(2) * S(17) + S(18) / (S(17) + S(18))$	70382850
1715		453 CONTINUE	70382860
1716		$MTST(1) = ALT(1) * S(13) * DELX(1) * P(10)$	70382870
1717		$S(34) = XBAR(1)$	70382880
1718		$MLCU(1) = (ALCU(1) - 1) + ALCU(1) * DELX(1) * P(10)$	70382890
1719		$S(35) = D(2)$	70382900
1720		$IF(MLCU(1)) 454,454,452$	70382910
1721		$452 S(35) = X(1) - DELX(1) / D(3) * D(2) * ALCU(1) - 1 + ALCU(1) /$	70382920
1722		$1 ALCU(1) - 1 + ALCU(1)$	70382930
1723		$454 S(35) = D(2)$	70382940
1724		$MLCL(1) = (ALCL(1) - 1) + ALCL(1) * DELX(1) * P(10)$	70382950
1725		$IF(MLCL(1)) 456,456,456$	70382960
1726		$456 S(35) = X(1) - DELX(1) / D(3) * D(2) * ALCL(1) - 1 + ALCL(1) /$	70382970
1727		$1 ALCL(1) - 1 + ALCL(1)$	70382980
1728		456 CONTINUE	70382990
1729	C	SUM PIECES	70383000
1730		$MTCT(1) = MTCU(1) + MTC(1) + MTCL(1)$	70383010
1731		$S(40) = MTCU(1) * S(21) + MTC(1) * S(22) + MTCL(1) * S(23)$	70383020
1732		$COCO(1) = S(40) / MTCT(1)$	70383030
1733		$MTLT(1) = MTLU(1) + MTL(1) + MTLL(1) + MTST(1) + MLCU(1) +$	70383040
1734		$1 MLCL(1)$	70383050
1735		$S(41) = MTLU(1) * S(31) + MTL(1) * S(32) + MTLL(1) * S(33) +$	70383060
1736		$1 MTST(1) * S(34) + MLCU(1) * S(35) + MLCL(1) * S(36)$	70383070
1737		$CCL(1) = S(41) / MTLT(1)$	70383080
1738	C	CALCULATE HINDR FRAMES	70383090
1739		$S(10) = FRMT(1) / SFRM(1)$	70383100
1740		$S(20) = FRMT(1) / SFRM(1)$	70383110
1741		$MTWF(1) = (S(10) + S(20) / D(2) * DELX(1))$	70383120
1742		$CONV(1) = X(1) - DELX(1) / D(3) * D(2) * S(10) + S(20) /$	70383130
1743		$1 S(10) + S(20)$	70383140
1744		500 CONTINUE	70383150
1745	C	CHECK FOR TAIL CONE	70383160
1746		$IF(NDTC) 600,600,700$	70383170
1747	C	THERE IS NO TAIL PADOME CALCULATE TAIL CONE HEIGHT	70383180
1748		$600 S(1) = S(1NC) / DELX(1NC)$	70383190
1749		$S(2) = S(1) / PER(1NC)$	70383200
1750		$S(3) = S(12) / D(2)$	70383210
1751		$S(4) = D(2)$	70383220
1752		$S(5) = S(3)$	70383230
1753		$IF(1CST - 2) 620,615,620$	70383240
1754	C	STRINGER	70383250
1755		$615 S(3) = BU(1NC) / BSTR(1NC) * S(2)$	70383260
1756		$S(4) = BS(1NC) / BSTR(1NC) * S(2)$	70383270
1757		$S(5) = BL(1NC) / BSTR(1NC) * S(2)$	70383280
1758		$620 S(6) = BU(1NC) * (TLU(1NC) - TCU(1NC)) * S(2) * D(4) * DELX(1NC) / SFRM(1NC)$	70383290
1759		$S(7) = BS(1NC) * (TLS(1NC) - TCS(1NC)) * S(2) * D(4) * DELX(1NC) / SFRM(1NC)$	70383300
1760		$S(8) = BL(1NC) * (TLL(1NC) - TCL(1NC)) * S(2) * D(4) * DELX(1NC) / SFRM(1NC)$	70383310
1761	C	DETERMINE LONGERON LAMB VOLUME	70383320
1762		$S(9) = S(3) * (TLU(1NC) - TCU(1NC)) * D(50) * DELX(1NC)$	70383330
1763		$S(10) = S(4) * (TLS(1NC) - TCS(1NC)) * D(50) * DELX(1NC)$	70383340
1764		$S(11) = S(5) * (TLL(1NC) - TCL(1NC)) * D(50) * DELX(1NC)$	70383350
1765	C	DETERMINE COVER COMPONENT HEIGHT	70383360
1766		$MTCU(1NC) = (TCU(1NC) * BU(1NC) * DELX(1NC) * S(2) + S(6) + S(9)) *$	70383370
1767		$IF(P(7))$	70383380
1768		$MTC(1NC) = (TCS(1NC) * BS(1NC) * DELX(1NC) * S(2) + S(7) + S(10)) *$	70383390
1769		$D(2) * P(7)$	70383400
1770		$MTCL(1NC) = (TCL(1NC) * BL(1NC) * DELX(1NC) * S(2) + S(8) + S(11)) *$	70383410
1771		$IF(P(7))$	70383420
1772		$MTCT(1NC) = MTCU(1NC) + MTC(1NC) + MTCL(1NC)$	70383430
1773		$S(12) = D(2) * S(2) - D(1)$	70383440
1774		$COCO(1NC) = X(1NC) - DELX(1NC) / D(3) * D(2) * S(12) + D(1) /$	70383450

[illegible]

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
1046		1(D(114)),ANTA(1),D(116),PERF(1),D(118),PERA(1),	70240250
1047		2(D(120)),PROF(1),D(122),PRDA(1)	70240260
1048		EQUIVALENCE (D(124)),DEPF(1),D(126),DEPA(1),	70240270
1049		1(D(128)),MIDF(1),D(130),MIDA(1)	70240280
1050		EQUIVALENCE (T(1),S(1)),T(144),DOO(1),T(146),MO(1),	70240290
1051		1(T(148)),RO(1),T(150),TGJF(1),T(152),TGJA(1),	70240300
1052		2(T(120)),FMP(1)	70240310
1053		EQUIVALENCE (T(16)),SA(1)	70240320
1054		EQUIVALENCE (04(1)),FD1	70240330
1055		EQUIVALENCE (ND(10)),1,(ND(102)),J1,(ND(107)),1)	70240340
1056		EQUIVALENCE (ND(11)),NC)	40240345
1057	C		70240350
1058	C	NOTE FD = FRAME DEPTH CIND(14) = NO OF RADII SHROUD	70240360
1059	C	SET UP NO CUTOUT DATA	70240370
1060		S(10) = D(2)*RO(1) + MO(1)	70240380
1061		S(11) = D(2)*RO(1) + DOO(1)	70240390
1062		S(12) = D(2)*S(10) + S(11) + D(2)*D(15)*RO(1) - D(8)*RO(1)	70240400
1063		S(13) = S(10)*S(11) + D(15)*RO(1)**2 - D(4)*RO(1)**2	70240410
1064		S(20) = D(2)	70240420
1065	C	SET TGJF(1) AND TGJA(1) FOR NO CUTOUTS	70240430
1066	C	G = E/(2*(1+NU)) = S(14)	70240440
1067		S(14) = FMP(60)/(D(2)*(D(1) + FMP(62)))	70240450
1068		TGJF(1) = G*RO(1)*S(12)/D(4)/(S(13)**2/S(14))	70240460
1069		TGJA(1) = TGJF(1)	70240470
1070		ACRS(1) = S(13)	70240480
1071		ANTA(1) = S(13)	70240490
1072		PERA(1) = S(13)	70240500
1073		PERF(1) = S(12)	70240510
1074		PRDA(1) = S(12)	70240520
1075		PROF(1) = D(2)	70240530
1076		PRDA(1) = D(2)	70240540
1077		DEPF(1) = S(11)	70240550
1078		DEPA(1) = S(11)	70240560
1079		MIDF(1) = S(10)	70240570
1080		MIDA(1) = S(10)	70240580
1081	C		70240590
1082	C	SET UP COUNTER FORWARD 11=1 AFT 11=2	70240600
1083		11 = 1	70240610
1084	C	START TEST FOR DECKS AND CUTOUTS	70240620
1085		2 IF(DOHT(1)) 400,400,10	70240630
1086		10 IF(DOHT(1) - D(1)) 20,400,400	70240640
1087		20 IF(CTOL(1)) 40,100,40	70240650
1088		40 IF(11-1) 50,50,70	70240660
1089		50 IF(11-1) 100,100,95	70240670
1090		95 IF(CTOL(1-1)) 300,100,300	70240680
1091		70 IF(CTOL(1+1)) 300,100,300	70240690
1092		100 IF(CTOL(1)) 200,110,200	70240700
1093		110 IF(11 - 1) 120,120,130	70240710
1094		120 DEPF(1) = S(11)*D(1) - DOHT(1)	70240720
1095		PROF(1) = S(10)	70240730
1096		S(43) = S(11)*DOHT(1)	
1097		IF(S(43) .GT. DEPF(1)) DEPF(1) = S(43)	
1098		11 = 11+1	70240740
1099		GO TO 20	70240750
1100		130 DEPA(1) = S(11)*D(1) - DOHT(1)	70240760
1101		PRDA(1) = S(10)	70240770
1102		S(43) = S(11)*DOHT(1)	70240771
1103		IF(S(43) .GT. DEPA(1)) DEPA(1) = S(43)	70240772
1104		IF(NC - 1) 135,130,1000	70240773
1105		130 ANTA(1) = ANTF(1)	70240774
1106		PERA(1) = PERF(1)	70240775
1107		PRDA(1) = PROF(1)	70240776
1108		DEPA(1) = DEPF(1)	70240777
1109		MIDA(1) = MIDF(1)	70240778
1110		GO TO 1000	70240780
1111		200 IF(11-1) 210,210,200	70240790
1112		210 IF(11-1) 100,100,200	70240800
1113		200 IF(CTOL(1-1)) 301,120,301	70240810
1114		200 IF(CTOL(1+1)) 301,1000,301	70240820
1115	C		70240830
1116	C	WRITE ERROR MESSAGE	70240840



04/10/76	INPUT LISTING	AUTOFLON CHART SET - SHEEP	SECOND FUELBASE OVERLAY
CARD NO	****	CONTENTS	****
1017	400 WRITE(6,00) I		70240000
1018	60 FORMAT(10H,10H,21H*** ERROR MESSAGE ***,//5X,		70240000
1019	100CHECK INPUT DATA SET SECTION,13,3X,17CHECK HEIGHT ERROR)		70240070
1020	DOHT(1) = 0(24)		70240000
1021	C		70240000
1022	C TEST FOR CUTOUT TOP AND BOTTOM WITH VERTICAL PANELS		70240000
1023	C NO HORIZONTAL DECKS EXIST		70240010
1024	400 IF(00H(1) - 0(1)) 1000,1000,500		70240020
1025	500 IF(CTOL(1)) 510,1000,510		70240030
1026	510 IF(CTOL(1)) 520,1000,520		70240040
1027	520 IF(CTOL(1)) 530,950,530		70240050
1028	530 IF(CTOL(1)) 540,950,540		70240060
1029	550 IF(1-1) 1000,1000,500		70240070
1030	560 IF(CTOL(1)) 570,1000,570		70240080
1031	570 IF(CTOL(1)) 580,1000,580		70240090
1032	C		70241000
1033	C WRITE WARNING MESSAGE		70241010
1034	600 WRITE(6,01) I		70241020
1035	61 FORMAT(10H,21H*** WARNING MESSAGE **,//5X,7HSECTION,13,3X,		70241030
1036	15THCUTOUT TOP AND BOTTOM IS BEYOND THE SCOPE OF THIS PROGRAM)		70241040
1037	GO TO 1000		70241050
1038	C		70241060
1039	C CUTOUT IS ON BOTTOM		70241070
1040	300 S(15) = DOHT(1)		70241080
1041	S(4) = 0(1) - DOHT(1)*S(11)		70241090
1042	IF(1 - 1) 310,310,303		70241002
1043	303 S(44) = DOHT(1-1)		70241004
1044	S(45) = 0(1) - DOHT(1-1)*S(11)		70241005
1045	GO TO 310		70241100
1046	C CUTOUT IS ON TOP		70241110
1047	301 S(15) = 0(1) - DOHT(1)		70241120
1048	S(4) = DOHT(1)*S(11)		70241130
1049	IF(1 - 1) 310,310,305		70241132
1050	305 S(44) = 0(1) - DOHT(1-1)		70241134
1051	S(45) = DOHT(1-1)*S(11)		70241135
1052	C		70241140
1053	C TEST FOR CURVED S-HOUD TYPE ARRANGEMENT		70241150
1054	310 S(16) = RAD(1)		70241160
1055	IF(S(16)) 311,320,314		70241170
1056	311 IF(1) - 1) 310,310,312		70241180
1057	312 S(16) = - RAD(1)		70241190
1058	314 IF(CIND(14) - 0(1)) 400,400,450		70241200
1059	C		70241210
1060	316 IF(1 - 1) 320,320,317		70241212
1061	317 S(15) = S(44)		70241214
1062	S(4) = S(45)		70241216
1063	C THE DECKING IS HORIZONTAL		70241220
1064	320 S(17) = S(15)*S(11)		70241230
1065	S(18) = S(11) - RO(1)		70241240
1066	IF(RO(1) - S(17)) 321,321,331		70241250
1067	321 IF(S(17) - S(18)) 322,322,330		70241260
1068	322 S(25) = 0(2)*S(11) - S(17) + S(18) + RO(1)*0(15) - 0(4)		70241270
1069	S(24) = S(18)*S(11) - S(17) + 0(15)*0(2) - 0(2)*RO(1)*2		70241280
1070	S(20) = S(18)		70241290
1071	S(42) = S(18)		70241300
1072	GO TO 340		70241300
1073	330 J = 2		70241330
1074	S(21) = S(11) - S(17)		70241340
1075	332 S(22) = RO(1) - S(21)		70241350
1076	S(23) = ACOS(S(22)/RO(1))		70241360
1077	S(25) = 0(2)*RO(1) + 0(2)*RO(1)*S(23)		70241370
1078	S(24) = 0(2)*RO(1)*S(21) + RO(1)*2*S(23) - S(22)*RO(1)*SIN(S(23))		70241380
1079	S(20) = 0(2)*RO(1) + 0(2)*RO(1)*SIN(S(23))		70241390
1080	S(42) = S(20)		70241400
1081	IF(J-1) 330,330,340		70241400
1082	331 J = 1		70241410
1083	S(21) = S(17)		70241420
1084	GO TO 332		70241430
1085	335 S(24) = S(13) - S(24)		70241440
1086	S(25) = S(12) - S(25)		70241450
1087	S(42) = S(10)		70241460

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
1000	340 S(20) = 0.500(1)*(S(25) + S(20)/D(4)/(S(24)**2)/S(14))		70241460
1000	IF(111) 000,000,050		70241470
1000	C		70241480
1001	C SINGLE RADIUS SHROUD		70241490
1002	400 S(17) = S(13)*S(11)		70241500
1003	S(10) = S(10) + S(17)		70241510
1004	S(42) = S(10)/D(2) - S(10)		70241520
1005	IF(S(10) - S(11)) 401,401,700		70241530
1005	401 IF(S(11) - FD - S(10)) 402,403,403		70241540
1007	C		70241550
1008	C WRITE WARNING MESSAGE		70241560
1008	402 WRITE(6,62) I		70241570
2000	62 FORMAT(1H0,10X,21H** WARNING MESSAGE **//5X,7HSECTION,13,3X,		70241580
2001	153HSHROUD DATA - CUTOFF - FRAME DEPTH IS LESS THAN NOTED)		70241590
2002	403 IF(D(2)*S(10) - S(10)) 406,700,700		70241600
2003	406 IF(S(10)/D(2) - FD - S(10)) 407,408,408		70241610
2004	C		70241620
2005	C WRITE WARNING		70241630
2005	407 WRITE(6,62) I		70241640
2007	408 IF(10(1)) - S(10)) 410,420,420		70241650
2008	410 S(21) = S(10) - 10(1)		70241660
2009	S(23) = ASIN(S(21)/RO(1))		70241670
2010	S(25) = S(12) - D(2)*RO(1) - D(2)*RO(1)*S(23)		70241680
2011	S(20) = S(10)*D(15) + D(2)*S(17) - D(2)*RO(1) +		70241690
2012	10(2)*RO(1)*COS(S(23))		70241700
2013	S(24) = S(13) - D(15)/D(2)*(S(10)**2) - D(2)*S(10)*S(17) +		70241710
2014	10(2)*S(21)*RO(1) - RO(1)**2*S(23) - S(21)*RO(1)*COS(S(23))		70241720
2015	S(41) = S(11) - RO(1)*D(1) - COS(S(23))		70241730
2016	GO TO 340		70241740
2017	420 S(25) = S(12) - D(2)*S(10)		70241750
2018	S(20) = D(15)*S(10) + D(2)*S(17)		70241760
2019	S(24) = S(13) - D(15)/D(2)*(S(10)**2) - D(2)*S(10)*S(17)		70241770
2020	S(41) = S(11)		70241780
2021	GO TO 340		70241790
2022	C		70241800
2023	C DOUBLE SHROUD		70241810
2024	450 S(17) = S(15)*S(11)		70241820
2025	S(10) = S(10) + S(17)		70241830
2026	S(42) = S(10)/D(2) - D(2)*S(10)		70241840
2027	IF(S(10) - S(11)) 451,401,700		70241850
2028	451 IF(S(11) - FD - S(10)) 452,453,453		70241860
2029	C		70241870
2030	C WRITE WARNING MESSAGE		70241880
2031	452 WRITE(6,62) I		70241890
2032	453 IF(S(10) - S(10)/D(4)) 454,700,700		70241900
2033	454 IF(S(10)/D(2) - FD - D(2)*S(10)) 455,456,456		70241910
2034	C		70241920
2035	C WRITE WARNING MESSAGE		70241930
2036	455 WRITE(6,62) I		70241940
2037	456 IF(10(1)) - S(10)) 457,405,405		70241950
2038	457 IF(S(11)/D(2) - S(17)) 458,405,405		70241960
2039	458 IF(100(1)) + S(11)/D(2) - S(17)) 459,405,405		70241970
2040	459 S(30) = S(10) - 10(1)		70241980
2041	S(31) = S(17) - S(11)/D(2) - 000(1)		70241990
2042	S(32) = RO(1) - S(10)		70242000
2043	S(33) = (S(30)**2 + S(31)**2)**.5		70242010
2044	IF(S(33) - S(32)) 460,460,700		70242020
2045	460 IF(S(32) - FD - S(33)) 461,405,405		70242030
2046	461 WRITE(6,62) I		70242040
2047	C		70242050
2048	C ALL TESTS SATISFIED CALCULATE GJ		70242060
2049	466 IF(10(1)) - D(2)*S(10)) 468,400,400		70242070
2050	468 S(21) = D(2)*S(10) - 10(1)		70242080
2051	S(23) = ASIN(S(21)/RO(1))		
2052	S(25) = S(12) - D(2)*RO(1) - D(2)*RO(1)*S(23)		70242100
2053	S(20) = D(2)*S(10)*D(15) + D(4)*S(17) - D(2)*RO(1) +		70242110
2054	10(2)*RO(1)*COS(S(23))		70242120
2055	S(24) = S(13) - D(15)*S(10)**2 - D(4)*S(10)*S(17) +		70242130
2056	10(2)*S(21)*RO(1) - RO(1)**2*S(23) - S(21)*RO(1)*COS(S(23))		70242140
2057	S(41) = S(11) - RO(1)*D(1) - COS(S(23))		70242150
2058	GO TO 340		70242160

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	****	CONTENTS	****
2000	400 S(25) = S(12) - 0(4)*S(16)		70242170
2001	S(20) = 0(2)*0(15)*S(16) + 0(4)*S(17)		70242180
2002	S(24) = S(13) - 0(15)*S(16)**2 - 0(4)*S(16)*S(17)		70242190
2003	S(4) = S(11)		70242200
2004	GO TO 340		70242210
2005	C		70242220
2006	C ERROR MESSAGE		70242230
2007	700 WRITE(6,33) I		70242240
2008	63 FORMAT(10H,21H*** ERROR MESSAGE ***,,/X,		70242250
2009	10H)CHECK INPUT DATA SET SECTION,13,3X,		70242260
2010	20H)CHECK HEIGHT OR RADIUS ERROR)		70242270
2011	IF(11 - 1) 710,710,1000		70242270
2012	710 11 = 11 + 1		70242280
2013	GO TO 20		70242290
2014	C		70242300
2015	C SET TOL FORWARD RETURN FOR AFT REQUIREMENT		70242310
2016	000 TOLF(1) = S(26)		70242320
2017	ANTF(1) = S(24)		70242330
2018	PERF(1) = S(20) + S(25)		70242340
2019	PROF(1) = S(20)		70242350
2020	DEPF(1) = S(4)		70242360
2021	MIDF(1) = S(42)		70242370
2022	11 = 11 + 1		70242380
2023	GO TO 20		70242390
2024	C		70242400
2025	C SET TOL AFT		70242410
2026	000 TOLAJ(1) = S(26)		70242420
2027	ANTAJ(1) = S(24)		70242430
2028	PERAJ(1) = S(20) + S(25)		70242440
2029	PROAJ(1) = S(20)		70242450
2030	DEPAJ(1) = S(4)		70242460
2031	MIDAJ(1) = S(42)		70242470
2032	C EXIT		70242480
2033	1000 CONTINUE		70242490
2034	RETURN		70242500
2035	END		70242510
2036	C		70242520
2037	C SUBROUTINE SUBROD		70242530
2038	C		70242540
2039	C		70242550
2040	C		70242560
2041	C		70242570
2042	C		70242580
2043	C		70242590
2044	C		70242600
2045	C		70242610
2046	C		70242620
2047	C		70242630
2048	C		70242640
2049	C		70242650
2050	C		70242660
2051	C		70242670
2052	C		70242680
2053	C		70242690
2054	C		70242700
2055	C		70242710
2056	C		70242720
2057	C		70242730
2058	C		70242740
2059	C		70242750
2060	C		70242760
2061	C		70242770
2062	C		70242780
2063	C		70242790
2064	C		70242800
2065	C		70242810
2066	C		70242820
2067	C		70242830
2068	C		70242840
2069	C		70242850
2070	C		70242860
2071	C		70242870
2072	C		70242880
2073	C		70242890
2074	C		70242900
2075	C		70242910
2076	C		70242920
2077	C		70242930
2078	C		70242940
2079	C		70242950
2080	C		70242960
2081	C		70242970
2082	C		70242980
2083	C		70242990
2084	C		70243000
2085	C		70243010
2086	C		70243020
2087	C		70243030
2088	C		70243040
2089	C		70243050
2090	C		70243060
2091	C		70243070
2092	C		70243080
2093	C		70243090
2094	C		70243100
2095	C		70243110
2096	C		70243120
2097	C		70243130
2098	C		70243140
2099	C		70243150
2100	C		70243160
2101	C		70243170
2102	C		70243180
2103	C		70243190
2104	C		70243200
2105	C		70243210
2106	C		70243220
2107	C		70243230
2108	C		70243240
2109	C		70243250
2110	C		70243260
2111	C		70243270
2112	C		70243280
2113	C		70243290
2114	C		70243300
2115	C		70243310
2116	C		70243320
2117	C		70243330
2118	C		70243340
2119	C		70243350
2120	C		70243360
2121	C		70243370
2122	C		70243380
2123	C		70243390
2124	C		70243400
2125	C		70243410
2126	C		70243420
2127	C		70243430
2128	C		70243440
2129	C		70243450

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
2130		EQUIVALENCE (T(1),S(1),T(10),S(1))	70270140
2131		EQUIVALENCE (T(44),DOO(1),T(16),MD(1),T(48),RO(1))	70270150
2132		EQUIVALENCE (ND(10),J,(ND(10),J),(ND(10),K)	70270160
2133		EQUIVALENCE (ND(12),ICST)	70270170
2134	C		70270180
2135	C	CALCULATE UNIT COVER INERTIA	70270190
2136		$S(4) = D(2) * (RO(1) + DOO(1))$	70270200
2137		$S(5) = D(2) * (MD(1) * RO(1) + DOO(1)) * 2 + RO(1) * (RO(1) * 2 / D(8))$	70270210
2138		$I(15) = D(2) * RO(1) * DOO(1) * D(25) + DOO(1) * 2 * D(15) / D(4)$	70270220
2139		$S(6) = S(5)$	70270230
2140		$S(17) = D(2) * (MD(1) * 3 / D(3) + RO(1) * (RO(1) * 2 / D(8) * D(15) - D(2)))$	70270240
2141		$MD(1) * MD(1) * D(2) - D(25) + MD(1) * 2 * D(15) / D(4)$	70270250
2142		$S(8) = S(7)$	70270260
2143		$S(9) = D(4) * (DOO(1) * 3 / D(3) + RO(1) * (RO(1) * 2 / D(8))$	70270270
2144		$I(15) - D(2) + RO(1) * DOO(1) * D(2) - D(25) + DOO(1) * 2$	70270280
2145		$MD(15) / D(4)$	70270290
2146		$S(18) = D(4) * (DOO(1) * RO(1) + MD(1)) * 2 + RO(1) * (RO(1) * 2 / D(8))$	70270300
2147		$I(15) + D(2) + RO(1) * MD(1) * D(25) + MD(1) * 2 * D(15) / D(4)$	70270310
2148	C	CLAR BENDING ELEMENT SECTION PROPERTIES	70270340
2149		DO 10 J=1,20	70270350
2150		$S(1) = D(24)$	70270360
2151		10 CONTINUE	70270370
2152	C	ICST = CONSTRUCTION INDICATOR	70270380
2153	C	$S(1) =$ STRINGER SPACING $S(2) =$ NUMBER OF STRINGERS (LND)	70270390
2154	C	$S(3) =$ NUMBER OF SECONDARY LONDS	70270400
2155		IF (ICST - 2) 100,200,100	70270410
2156	C	$S(1) =$ LONDERON DEPTH TO SECTION HEIGHT RATIO	70270420
2157		100 $S(1) = S(1) * (RO(1) + DOO(1))$	70270430
2158		$S(11) = S(12) / D(2) * S(1) * 2$	70270440
2159		$S(12) = S(11)$	70270450
2160		$S(19) = S(1)$	70270460
2161		$S(17) = (S(1) / D(2) * (DOO(1) + RO(1)) * 2 * S(3)$	70270470
2162		$S(18) = (S(1) / D(2) * (MD(1) + RO(1)) * 2 * S(3)$	70270480
2163		IF (S(1) - DOO(1)) 101,101,110	70270490
2164		101 $S(13) = S(2) / D(2) * (RO(1) + MD(1)) * 2$	70270500
2165		$S(14) = S(13)$	70270510
2166		$S(20) = S(2) / D(4) * (RO(1) + MD(1))$	70270520
2167		GO TO 1000	70270530
2168		110 IF (S(1) - DOO(1) - RO(1)) 111,115,115	70270540
2169		111 $S(2) = S(1) - DOO(1)$	70270550
2170		$S(3) = ACOS(S(2) / RO(1))$	70270560
2171		$S(13) = S(2) / D(2) * (RO(1) * SIN(S(3)) + MD(1)) * 2$	70270570
2172		$S(14) = S(13)$	70270580
2173		$S(20) = S(2) / D(4) * (RO(1) * SIN(S(3)) + MD(1))$	70270590
2174		GO TO 1000	70270600
2175		115 $S(13) = S(2) / D(2) * MD(1) * 2$	70270610
2176		$S(14) = S(13)$	70270620
2177		$S(20) = S(2) / D(4) * MD(1)$	70270630
2178		GO TO 1000	70270640
2179		200 IF (MD(1) - S(1) / D(2)) 202,203,203	70270650
2180	C	FIRST STRINGER IS ON RADIUS 0/2 FROM CENTER LINE	70270660
2181		202 $S(1) = MD(1) + S(1) / D(2)$	70270670
2182		GO TO 250	70270680
2183		203 $S(2) = (MD(1) - S(1) / D(2)) / S(1)$	70270690
2184		$K = INT(S(2)) + 1$	70270700
2185		$S(3) = S(1) / D(2)$	70270710
2186		DO 204 J=1,K	70270720
2187		$S(13) = S(13) + S(3) * 2$	70270730
2188		$S(20) = S(20) + S(3)$	70270740
2189		$S(3) = S(3) + S(1)$	70270750
2190		204 CONTINUE	70270760
2191		$S(4) = K$	70270770
2192		$S(1) = MD(1) - S(1) * (S(4) - D(10))$	70270780
2193		$S(11) = S(11) + S(4) * (RO(1) + DOO(1)) * 2$	70270790
2194		$S(18) = S(18) + S(4) * (RO(1) + DOO(1))$	70270800
2195	C	CURVED PORTION OF UPPER PANEL	70270810
2196		250 $S(3) = S(1) - S(1)$	70270820
2197		IF (D(15) / D(4) * RO(1) - S(3)) 251,252,252	70270830
2198	C	THERE IS NO STRINGER ON THIS PORTION OF PANEL	70270840
2199		251 $S(1) = S(1) + D(15) / D(4) * RO(1)$	70270850
2200		GO TO 300	70270860

04/18/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
2001	200 S(2) = (D(15)/D(4)*RO(1) - S(3))/S(1)		70270070
2002	K = INT(S(2)) + 1		70270080
2003	S(4) = S(3)/RO(1)		70270090
2004	S(5) = S(1)/RO(1)		70270100
2005	DO 203 J=1,K		70270110
2006	S(11) = S(11) + (RO(1)*COS(S(4)) + DOO(1))**2		70270120
2007	S(13) = S(13) + (RO(1)*SIN(S(4)) + MD(1))**2		70270130
2008	S(19) = S(19) + RO(1)*COS(S(4)) + DOO(1)		70270140
2009	S(20) = S(20) + RO(1)*SIN(S(4)) + MD(1)		70270150
2010	S(4) = S(4) + S(5)		70270160
2011	203 CONTINUE		70270170
2012	S(6) = K - 1		70270180
2013	S(7) = (D(15)/D(4)*RO(1) - S(1) - S(11)*S(6)		70270190
2014	S(1) = S(7)		70271000
2015	C CURVED PORTION OF SIDE PANEL		70271010
2016	300 S(3) = S(11) - S(1)		70271020
2017	IF(D(15)/D(4)*RO(1) - S(3)) 301,302,302		70271030
2018	C THERE IS NO STRINGER ON THIS PORTION OF PANEL		70271040
2019	301 S(1) = S(1) + D(15)/D(4)*RO(1)		70271050
2020	GO TO 350		70271060
2021	302 S(2) = (D(15)/D(4)*RO(1) - S(3))/S(1)		70271070
2022	K = INT(S(2)) + 1		70271080
2023	S(4) = D(15)/D(4) + S(3)/RO(1)		70271090
2024	S(5) = S(1)/RO(1)		70271100
2025	DO 203 J=1,K		70271110
2026	S(11) = S(11) + (RO(1)*COS(S(4)) + DOO(1))**2		70271120
2027	S(13) = S(13) + (RO(1)*SIN(S(4)) + MD(1))**2		70271130
2028	S(19) = S(19) + RO(1)*COS(S(4)) + DOO(1)		70271140
2029	S(20) = S(20) + RO(1)*SIN(S(4)) + MD(1)		70271150
2030	S(4) = S(4) + S(5)		70271160
2031	303 CONTINUE		70271170
2032	S(6) = K - 1		70271180
2033	S(7) = (D(15)/D(4)*RO(1) - S(1) - S(11)*S(6)		70271190
2034	S(1) = S(7)		70271200
2035	C FLAT PORTION OF SIDE PANEL		70271210
2036	300 S(3) = S(11) - S(1)		70271220
2037	IF(S(3) - DOO(1)) 351,351,400		70271230
2038	C THERE ARE STRINGERS ON THIS PORTION OF THE PANEL		70271240
2039	351 S(2) = (DOO(1) - S(3))/S(1)		70271250
2040	K = INT(S(2)) + 1		70271260
2041	S(4) = DOO(1) - S(3)		70271270
2042	DO 202 J=1,K		70271280
2043	S(11) = S(11) + S(4)**2		70271290
2044	S(13) = S(13) + S(4)		70271300
2045	S(4) = S(4) - S(11)		70271310
2046	352 CONTINUE		70271320
2047	S(4) = K		70271330
2048	S(11) = S(11) + S(4)*(RO(1) + MD(1))**2		70271340
2049	S(20) = S(20) + S(4)*(RO(1) + MD(1))		70271350
2050	C SET UNIT INERTIAS TO TOTAL PER AIR VEHICLE		70271360
2051	400 S(111) = S(111)*D(2)		70271370
2052	S(112) = S(111)		70271380
2053	S(113) = S(113)*D(2)		70271390
2054	S(114) = S(113)		70271400
2055	S(115) = S(115)*D(4)		70271410
2056	S(116) = S(116)*D(4)		70271420
2057	1000 CONTINUE		70270007
2058	RETURN		70270008
2059	END		70270009
2060	C		
2061	C (*****)		
2062	C SUBROUTINE IELONG		
2063	C (*****)		
2064	C		
2065	SUBROUTINE IELONG	70000010	
2066	ENTRY SUBROUTINE	70000020	
2067	C SETUP SECTION PROPERTIES FOR ELLIPTICAL SHAPES - UNIT BENDING INERTIAS	70000030	
2068	C	70000040	
2069	COMMON TCBH(400)	70000050	
2070	C	70000060	
2071	DIMENSION B(2000),T(2000),DC(100),MD(200)	70000070	

CARD NO	****	CONTENTS	*****
2272	C		70200080
2273		EQUIVALENCE (D(1),TCOH(1)), (T(1),TCOH(2001)), (DC(1),TCOH(4101)),	70200090
2274		(IND(1),TCOH(4201))	70200100
2275	C		70200110
2276		RETURN	70200990
2277		END	70209990
2278	C		
2279	C	!!	
2280	C	SUBROUTINE LDCMK	
2281	C	!!	
2282	C		
2283		SUBROUTINE LDCMK	70230010
2284	C	WRITTEN 24 JANUARY 1972	70230020
2285	C	TO SELECT CRITICAL LOADS FOR FUELAGE SHELL	70230030
2286	C	TRANSFER MATERIAL DATA TO WORKING REGION FOR SHELL EVALUATION	70230040
2287	C		70230050
2288		COMMON TCOH(400)	70230060
2289	C		70230070
2290		DIMENSION D(2000), T(2000), DC(100), MD(200)	70230080
2291		DIMENSION THB(120)	70230090
2292		DIMENSION S(100), S2(20), PTP(300), SB(200)	70230100
2293		DIMENSION I1(20), I2(20), I3(20)	70230110
2294	C		70230120
2295		EQUIVALENCE (D(1),TCOH(1)), (T(1),TCOH(2001)), (DC(1),TCOH(4101)),	70230130
2296		(IND(1),TCOH(4201))	70230140
2297		EQUIVALENCE (D(1301),THB(1))	70230150
2298		EQUIVALENCE (T(1),S(1)), (T(121),S2(1)), (T(1201),PTP(1))	70230160
2299		EQUIVALENCE (T(100),SB(1))	70230170
2300		EQUIVALENCE (MD(91),IF(1),IND(9N),IFN), (IND(101),I1), (IND(102),J),	70230180
2301		(IND(11N),LCM), (IND(115),NOC)	70230190
2302		EQUIVALENCE (IND(1N1),I1(1)), (IND(101),I2(1)), (IND(101),I3(1))	70230200
2303	C		70230210
2304		S(1) = D(2N)	70230220
2305		S(2) = D(2N)	70230230
2306		S(3) = D(2N)	70230240
2307		DO 2 J=1,IS	70230250
2308	C	CLEAR SECTION LOADS DATA	70230260
2309		S2(J) = D(2N)	70230270
2310	Z	CONTINUE	70230280
2311		I1(1) = D(1)	70230290
2312		I2(1) = D(1)	70230300
2313		I3(1) = D(1)	70230310
2314		DO 600 LCM=1,NOC	70230320
2315		IF1 = LCM + 60	
2316		IFN = LCM	70230340
2317		IFN = IFN + 6N	
2318		CALL READMS(I,SB(1),200,IF1)	
2319		CALL READMS(I,THB(1),120,IFN)	
2320	C	SETUP V/FBU , N/FCY	70230370
2321		S(7) SB((1+60)/THB(10))	70230380
2322		S(9) = ABS(S(7))	70230390
2323		IF(S(1) - S(9)) 10,20,20	70230400
2324		10 S(1) = S(9)	70230410
2325		S2(3) = SB(1+100)	70230420
2326		I3(1) = LCM	70230430
2327		20 S(7) = SB(1+100)/THB(10)	70230440
2328		IF(S(7)) 30,50,40	70230450
2329	C	BGMN BEGINNING	70230460
2330		30 IF(S(2) + S(7)) 31,50,50	70230470
2331		31 S(2) = - S(7)	70230480
2332		S2(1) = SB(1+100)	70230490
2333		I1(1) = LCM	70230500
2334		60 TO 50	70230510
2335		40 IF(S(3) - S(7)) 41,50,50	70230520
2336		41 S(3) = S(7)	70230530
2337		S2(2) = SB(1+100)	70230540
2338	C	UP ENDINGS	70230550
2339		I2(1) = LCM	70230560
2340	C	CHECK SHELL CONTENTS	70230570
2341		50 IF(SB(1+100)) 51,500,70	70230580
2342	C	BGMN FORCE - CONTENTS	70230

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CARD NO	****	CONTENTS	****
2343	S1 IF(05(1)+(40) - 52(4)) 52,500,500		70230500
2344	S2 52(4) = 55(1)+(40)		70230510
2345	S2(5) = LCM		70230520
2346	S2(7) = 55(130)		70230530
2347	S2(9) = 55(137)		70230540
2348	S2(9) = 55(138)		70230550
2349	S2(10) = 55(139)		70230560
2350	GO TO 500		70230570
2351	C UP FORCE - .CONTENTS		70230580
2352	70 IF(52(5) - 55(1)+(40)) 71,500,500		70230590
2353	71 52(5) = 55(1)+(40)		70230600
2354	S2(11) = LCM		70230710
2355	S2(12) = 55(130)		70230720
2356	S2(13) = 55(137)		70230730
2357	S2(14) = 55(138)		70230740
2358	S2(15) = 55(139)		70230750
2359	500 IF(1 - 1) 502,502,500		70230760
2360	C SET MAXIMUM LOADS SURFACE REACTIONS ONE TIME ONLY		70230770
2361	502 S(0) = ABS(55(50) + 55(51) + 55(52))*D(2)		70230780
2362	S(0) = ABS(55(53) + 55(54))*D(2)		70230790
2363	S(10) = ABS(55(115) + 55(116))		70230800
2364	S(11) = ABS(55(57) + 55(58))*D(2)		70230810
2365	S(12) = ABS(55(90) + 55(91))*D(2)		70230820
2366	IF(52(16) - S(0)) 501,510,510		70230830
2367	501 S2(16) = S(0)		70230840
2368	S10 IF(52(17) - S(0)) 511,520,520		70230850
2369	S11 S2(17) = S(0)		70230860
2370	S20 IF(52(18) - S(10)) 521,530,530		70230870
2371	S21 S2(18) = S(10)		70230880
2372	S30 IF(52(19) - S(11)) 531,540,540		70230890
2373	S31 S2(19) = S(11)		70230900
2374	540 IF(52(20) - S(12)) 541,550,550		70230910
2375	541 S2(20) = S(12)		70230920
2376	600 CONTINUE		70230930
2377	C		70230940
2378	C STORE MATERIAL PROPERTIES FOR CRITICAL BOW BENDING CONDITION		70230950
2379	IF4 = 12(1)		70230960
2380	IF4 = IF4 + 54		
2381	CALL READP(1,TM5(1),120,IF4)		
2382	DO 100 J=1,30		70230980
2383	FYP(J) = TM5(J)		70230990
2384	FYP(J+50) = TM5(J+30)		70231000
2385	FYP(J+100) = TM5(J+60)		70231010
2386	100 CONTINUE		70231020
2387	C		70231030
2388	C STORE MATERIAL PROPERTIES FOR CRITICAL UPBENDING CONDITION		70231040
2389	IF4 = 11(1)		70231050
2390	IF4 = IF4 + 54		
2391	CALL READP(1,TM5(1),120,IF4)		
2392	DO 110 J=1,30		70231070
2393	FYP(J+30) = TM5(J)		70231080
2394	FYP(J+100) = TM5(J+30)		70231090
2395	FYP(J+210) = TM5(J+60)		70231100
2396	110 CONTINUE		70231110
2397	C		70231120
2398	C STORE MATERIAL PROPERTIES FOR CRITICAL SHEAR CONDITION		70231130
2399	IF4 = 13(1)		70231140
2400	IF4 = IF4 + 54		
2401	CALL READP(1,TM5(1),120,IF4)		
2402	DO 120 J=1,30		70231160
2403	FYP(J+60) = TM5(J)		70231170
2404	FYP(J+150) = TM5(J+30)		70231180
2405	FYP(J+240) = TM5(J+60)		70231190
2406	120 CONTINUE		70231200
2407	RETURN		70230000
2408	END		70230000
2409	C		
2410	C		
2411	C SUBROUTINE LONGS		
2412	C		
2413	C		

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CARD NO	****	CONTENTS	****
2414		SUBROUTINE LONDS	70260010
2415	C	WRITTEN 24 JANUARY 1972	70260020
2416	C	SETUP STRINGER SEARCH OR LONGERON CRITERIA	70260030
2417	C		70260040
2418		CORRDN TCON(400)	70260050
2419	C		70260060
2420		DIMENSION D(2000),T(2000),DC(100),ND(200)	70260070
2421		DIMENSION CIND(50)	70260080
2422		DIMENSION MTLG(20)	70260090
2423		DIMENSION S(100),S1(20),TOT(20),DOO(20),MO(20),RO(20),PER(20)	70260100
2424		DIMENSION STND(20),BSTR(20)	70260110
2425	C		70260120
2426		EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(400)),	70260130
2427		(ND(1),TCON(400))	70260140
2428		EQUIVALENCE (D(2),CIND(1))	70260150
2429		EQUIVALENCE (D(42),MTLG(1))	70260160
2430		EQUIVALENCE (T(1),S(1)),(T(10),S(1)),(T(20),TOT(1)),	70260170
2431		(T(44),DOO(1)),(T(46),MO(1)),(T(48),RO(1)),(T(54),PER(1))	70260180
2432		EQUIVALENCE (T(90),STND(1)),(T(92),BSTR(1))	70260190
2433		EQUIVALENCE (ND(10),1),(ND(12),KC),(ND(122),ICST),	70260200
2434		(ND(123),ISTG)	70260210
2435	C		70260220
2436		IF(ICST - 2) 100,200,100	70260230
2437	C	LONGERON OR HONEYCOMB CONSTRUCTION 4 LONGERONS	70260240
2438		100 ISTG = 3	70260250
2439		S(12) = CIND(11)	70260260
2440		S(13) = CIND(12)	70260270
2441		IF(MTLG(1)) 101,103,150	70260272
2442		101 S(1) = - MTLG(1)	70260280
2443		GO TO 105	70260282
2444		103 IF(CIND(13)) 104,110,120	70260294
2445		104 S(1) = - CIND(13)	70260296
2446	C	LONGERON LOCATION IS DETERMINED BY ANGLE	70260300
2447		105 IF(KC - 2) 107,107,109	70260310
2448	C	ROUNDED RECTANGLE SHAPE	70260320
2449		107 S(1) = (ND(1)*COS(S(1)) + DOO(1))/RO(1) + DOO(1)	70260340
2450		GO TO 230	70260350
2451	C	NOTHING HAS BEEN LOADED TO DETERMINE LONGERON HEIGHT	70260360
2452	C	PROGRAM OVERRIDE	70260370
2453		110 CIND(13) = - D(15)/D(4)	70260380
2454		S(1) = - CIND(13)	70260382
2455		WRITE(6,60)	70260390
2456		60 FORMAT(1H0,10X,20H*** LONGERON DEPTH ERROR ***,	70260400
2457		1//7X,30HPROGRAM OVERRIDE ALPHA = P1/4)	70260410
2458		GO TO 105	70260420
2459	C	ELLIPTICAL SHAPE IS NOT INCLUDED IN CURRENT PROGRAM	70260430
2460		109 S(1) = COS(S(1))	70260440
2461		GO TO 230	70260450
2462	C	LONGERON LOCATION IS DETERMINED BY DEPTH RATIO	70260470
2463		120 IF(CIND(13) - D(1)) 121,121,122	70260480
2464		121 S(1) = CIND(13)	70260490
2465		GO TO 230	70260500
2466	C	RIDICULOUS SITUATION	70260510
2467		122 CIND(13) = 0.9	70260520
2468		WRITE(6,61)	70260530
2469		61 FORMAT(1H0,10X,20H*** LONGERON DEPTH ERROR ***,	70260540
2470		1//7X,30HPROGRAM OVERRIDE HEIGHT RATIO = 0.9)	70260550
2471		GO TO 121	70260560
2472		150 IF(D(1) - MTLG(1)) 151,152,152	70260570
2473	C	RIDICULOUS SITUATION	70260580
2474		151 MTLG(1) = 0.9	70260590
2475		WRITE(6,61)	70260600
2476		152 S(1) = MTLG(1)	70260610
2477		GO TO 230	70260620
2478	C	STRINGER CONSTRUCTION	70260630
2479		200 IF(CIND(15)) 210,210,300	70260640
2480	C	SETUP STRINGER SPACING SEARCH	70260650
2481		210 ISTG = 1	70260660
2482		S(1) = D(37)	70260670
2483		211 S(12) = PER(1)/S(1)	70260680
2484		IF(S(12) - D(38)) 220,230,230	70260690





04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
2506	11 S(8) = S(3)		70330360
2507	12 IF(1CST - 2) 10,20,10		70330362
2508	10 S(4) = S(8)/(S(11) + S(12))*S(14)/(D(2)*FPP(125)		70330370
2509	17 S(4) = D(53) 14,20,20		70330380
2510	14 S(4) = D(53)		70330380
2511	C SET UP CONSTANTS		70330400
2512	20 S(2) = D(4)*D(50) + FD/D(2)		70330410
2513	S(3) = D(50)*(FD**2 + D(2)/D(3)*D(50)**3) - D(50)**2*FD +		70330420
2514	IFD**3/D(10)		70330430
2515	S(5) = (S(3)/S(2))**.5		70330440
2516	S(6) = D(1) + IFD/D(2)/S(5)**2		70330450
2517	C CHECK GENERAL SHELL STABILITY		70330460
2518	S(7) = S(8)*FPP(11)/D(15)**2*D(40)/FPP(215)/FPP(11)/S(3)		70330470
2519	17 S(7) = D(57) 21,22,22		70330480
2520	21 S(7) = D(57)		70330490
2521	C CHECK ACOUSTICS		70330500
2522	22 S(40) = S(7)		70330501
2523	S(41) = S(7)		70330502
2524	17 ACQU(1) 20,20,23		70330510
2525	23 S(10) = ACQU(1)/D(13)		70330520
2526	S(10) = EQU(23)*D(10)**S(10)		70330530
2527	S(20) = (FPP(250)*FPP(252))**.5		70330540
2528	C**** D(70 THRU D(80) ARE CONSTANTS FOR ACOUSTIC EQUATIONS	****	70330550
2529	S(8) = EQU(25)*FPP(11)*S(10)**.5 /S(20)		70330562
2530	C TEST IF FILLED		70330563
2531	17 (FIL .LE. 0) S(8) = S(8)*D(70)		70330564
2532	C SET UP CURVATURE CORRECTION		70330566
2533	C UPPER		70330567
2534	S(44) = D(1)		70330568
2535	17 (RCU(1) .LE. 0.0) GO TO 232		70330569
2536	S(43) = FPP(11)**2/S(8)/RCU(1)		70330560
2537	S(44) = D(77)*D(70)*S(43)*D(70)/S(43)*D(80)*ALOG10(S(43))		70330561
2538	C LOWER		70330562
2539	232 S(45) = D(1)		70330563
2540	17 (RCL(1) .LE. 0.0) GO TO 234		70330564
2541	S(43) = FPP(11)**2/S(8)/RCL(1)		70330565
2542	S(45) = D(77)*D(70)*S(43)*D(70)/S(43)*D(80)*ALOG10(S(43))		70330566
2543	C SIDE		70330567
2544	234 S(46) = D(1)		70330568
2545	17 (RCS(1) .LE. 0.0) GO TO 236		70330569
2546	S(43) = FPP(11)**2/S(8)/RCS(1)		70330570
2547	S(46) = D(77)*D(70)*S(43)*D(70)/S(43)*D(80)*ALOG10(S(43))		70330571
2548	C		70330572
2549	236 S(48) = S(44)*S(8)		70330573
2550	S(41) = S(45)*S(8)		70330574
2551	S(8) = S(46)*S(8)		70330576
2552	17 (S(48) .LT. S(7)) S(48) = S(7)		70330577
2553	17 (S(41) .LT. S(7)) S(41) = S(7)		70330578
2554	17 (S(7) .LT. S(8)) S(7) = S(8)		70330579
2555	20 S(8) = S(7)		70330580
2556	S(8) = S(5)		70330580
2557	S(10) = S(5)		70330580
2558	17 (S(10) - S(8)) 20,200,200		703305810
2559	C DETERMINE RING FORCED CRIPPLING REQUIREMENT		703305820
2560	20 17 (RCS(1)) 31,31,32		703305830
2561	31 S(12) = D(24)		703305840
2562	GO TO 33		703305850
2563	32 S(47) = FPP(11)/S(10)		703305860
2564	17 (S(47) - D(1)) 401,403,403		703305872
2565	401 S(47) = S(50)/FPP(11)		703305884
2566	403 17 (D(2) .LT. S(47)) S(47) = D(2)		703305896
2567	S(12) = D(5)*D(8)*D(10)*FCS(11)*S(47)/RCS(1)		703305908
2568	33 S(11) = TANH(D(10) + S(12))*ALOG10(S(8)/S(10))		703305920
2569	C S(11) IS DIAGONAL TENSION FACTOR, K		703305931
2570	S(12) = S(11)*D(23)		703305940
2571	C FIRST APPROXIMATION OF DIAGONAL TENSION ANGLE		703305950
2572	S(14) = D(24)		703305960
2573	17 (1CST - 2) 25,27,25		703305970
2574	C LONGERON CONSTRUCTION		703305980
2575	25 S(14) = D(15)/D(4)		703305990
2576	C S(14) IS ALPHA, START WITH ALPHA = PI/4.0 FOR LONGERON		703306001

04/10/74	INPUT LISTING	AUTOFLON CHART SET - SHEEP	SECOND PUNCH OVERLAY
CARD NO	CONTENTS		
0027	S(40) = S(2)		70330774
0028	C FACTOR OF 2.0 IN LONGERON STRESS EQUATION		70330775
0029	GO TO 30		70330776
0030	C STRINGER CONSTRUCTION		70330778
0031	37 W(ACS(1)) 30.30,34		70330780
0032	34 S(15) = (S(10)/ACS(1))*(W(100)/S(10))**.5		70330779
0033	S(16) = (S(1) + S(15)*TCS(1)*W(100)/(S(10)/S(14)/W(100) +		70330780
0034	107W(11)/S(17)/S(12)/W(1245))**.5		70330780
0035	S(14) = S(15)/S(16)		70330800
0036	38 S(13) = (S(15)/S(14) + EQUAM(30)*S(14))/(S(1) + EQUAM(30)*S(14) +		70330810
0037	10EQUAM(37)*(S(14)**2))		70330800
0038	S(40) = S(1)		70330800
0039	C SET FACTOR TO 1.0 FOR STRINGER STRESS		70330800
0040	S(14) = S(12)*S(13)		70330830
0041	39 S(12) = S(10)*(S(1) - S(11))		70330840
0042	C S(13) IS STRINGER ON LONGERON STRESS		70330840
0043	S(13) = S(11)*S(10)/(S(140)*S(14)/S(10)/TCS(1) +		70330850
0044	1 S(12)*W(100)/W(100) )		70330851
0045	C S(15) = F/F(MAN)		70330850
0046	S(15) = S(1)		70330850
0047	W(17W(11)/S(10) - EQUAM(30)) 40.41,41		70330870
0048	40 S(15) = S(11)/(EQUAM(30) + (S(1) - S(11))*(EQUAM(40) -		70330880
0049	1 EQUAM(41)*W(17W(11)/S(10)))		70330880
0050	41 S(16) = EQUAM(42)		70330900
0051	W(ACS(1)) 44.44,42		70330910
0052	42 S(16) = ACS(1)		70330900
0053	W(EQUAM(42) . LT. ACS(1)) S(16) = EQUAM(42)		70330930
0054	44 S(17) = (EQUAM(43) + EQUAM(46)*S(16))*(W(1245)/W(100))		70330940
0055	1 *(S(11)/S(10))		70330941
0056	45 S(16) = W(1245)/EQUAM(44)/(W(1245)/W(1245) + EQUAM(45))**.5		70330950
0057	C S(16) = ALLOWABLE STRESS FOR RING		70330950
0058	S(16) = S(17)*S(16)		70330970
0059	C START SEARCH ON T-FRAME AND DIAGONAL TENSION ANGLE		70330980
0060	C ITERATE ON ANGLE 3 TIMES		70330980
0061	S(24) = TAN(S(14))		70330980
0062	GO DO 100 J=1,3		70331000
0063	S(17) = S(13)/S(24)		70331010
0064	C S(16) IS AVERAGE RING STRESS		70331020
0065	S(16) = S(11)*S(16)*S(24)/(S(17)*S(12)/S(10)/W(11)/TCS(1) +		70331025
0066	1 S(12)*W(100)/W(1245))		70331030
0067	S(16) = S(17)/W(100)		70331040
0068	C S(16) IS EPSILON SUB B. S(20) IS EPSILON SUB R.		70331041
0069	C S(20) IS EPSILON SUB C.		70331042
0070	S(20) = S(16)/W(1245)		70331050
0071	S(21) = SIN(S(24)*S(14))		70331050
0072	S(22) = S(16)/W(100)*(S(21)*S(11)/S(12) + S(21)*S(11) - S(11))		70331070
0073	(S(11) + W(100)))		70331080
0074	S(23) = S(24)		70331090
0075	W(ACS(1)) 67.67,64		70331100
0076	64 W(100) = 2) 66.66,66		70331110
0077	C LONGERON CONSTRUCTION		70331120
0078	66 S(25) = (W(11)/ACS(1))*S(24)**2 /S(16)		70331130
0079	GO TO 87		70331140
0080	C STRINGER CONSTRUCTION		70331150
0081	68 S(25) = (S(10)/ACS(1))**.2/S(16)		70331160
0082	87 S(24) = ((S(25) + S(10))/(S(25) + S(20) + S(23)))**.5		70331170
0083	S(14) = ATAN(S(24))		70331180
0084	100 CONTINUE		70331190
0085	C ITERATE ON T-FRAME - S(7)		70331200
0086	S(25) = (S(10)*S(24)/S(15)/S(10))**.2 + TCS(1)*S(11)		70331210
0087	C S(25) IS RA. S(26) IS RB. S(27) IS RC		70331215
0088	S(26) = S(12)/S(16)/W(11)/TCS(1)		70331220
0089	S(27) = S(12)*W(100)/W(115)		70331230
0090	110 S(28) = S(7)		70331240
0091	S(28) = S(28)*S(25) + S(27)		70331250
0092	S(28) = S(28)**2		70331260
0093	S(28) = S(28)**3		70331270
0094	S(27) = S(21)*S(28) - S(25)		70331280
0095	S(7) = S(28) - S(22)/(S(13)*S(28)*S(20)*S(20) + S(11))		70331290
0096	S(28) = S(7)		70331300
0097	W(S(28)) 111.100,112		70331310

09/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	CONTENTS		
2600	111 S(33) = - S(33)		70331200
2600	112 IF(S(33) - EQUA(45)/S(10)) 150,150,110		70331330
2700	150 IF(11-1) 151,151,100		70331340
2701	151 11 = 11 + 1		70331350
2702	IF(S(7) - S(8)) 161,161,00		70331360
2703	C CHECK AGAINST MINIMUM AND GENERAL STABILITY SIZING		70331380
2704	160 IF(S(7) - S(8)) 161,162,162		70331400
2705	161 S(7) = S(8)		70331410
2706	162 S(12) = S(7)*S(2)/S(6)		70331412
2707	S(13) = S(14)		70331414
2708	S(14) = S(11)		70331416
2709	C SET UP INTERMEDIATE FRAME FOR PRESSURE AND CONTENT LOADING		70331420
2710	C GET OUT - STOP HERE		70331430
2711	200 TOT(7) = (BX(1)*S(40) + D(2)*S(11)*S(7) + BL(1)*S(41))		70331440
2712	1 S(12)*WP(25)/WTH(1)		70331450
2713	FRMT(1) = TOT(7)*WTH(1)		70331460
2714	C SET UP EFFECTIVE MINOR FRAME AREA FOR STRINGER OR LONG-RON		70331470
2715	C FORCED CRIPPLING S(12)		70331480
2716	C		
2717	IF(IP(70))5001,5001,5002		
2718	5001 WRITE(6,61) 1		
2719	61 FORMAT(1H1,20X,40H*** BREAKPOINT OUTPUT - SUBROUTINE MINFR ***,	70220614	
2720	1 24X,20H** MINFR - (P(70) **//		
2721	1 20X,70XSECTION,13/ 5H,ENT-REGION)		
2722	DO 63 N=1,200,5		
2723	K = N*4		
2724	WRITE(6,62) N,(T(I),J=N,K,1)		
2725	62 FORMAT(4X,13,2F10.4)		
2726	63 CONTINUE		
2727	5002 RETURN	70330000	
2728	END	70330000	
2729	C		
2730	C		
2731	C SUBROUTINE MINFR		
2732	C		
2733	C		
2734	SUBROUTINE MINFR	7030	
2735	C	7030	
2736	COMMON TCON(400)	7030	
2737	C	7030	
2738	DIMENSION S(2000),T(2000),DC(100),ND(200)	7030	
2739	DIMENSION S(100)	7030	
2740	C	7030	
2741	EQUIVALENCE (D(1),TCON(1)),(T(1),TCON(200)),(DC(1),TCON(401)),	7030	
2742	(ND(1),TCON(420))	7030	
2743	EQUIVALENCE (T(1),S(1))	7030	
2744	EQUIVALENCE (ND(103),K)	7030	
2745	C	7030	
2746	S(10) = S(1) - S(2)	7030	
2747	S(11) = S(1) - S(3)	7030	
2748	S(12) = S(2) - S(3)	7030	
2749	S(13) = S(10)*S(11)	7030	
2750	S(14) = - S(10)*S(12)	7030	
2751	S(15) = S(11)*S(12)	7030	
2752	S(16) = S(5)/S(13)	7030	
2753	S(17) = S(6)/S(14)	7030	
2754	S(18) = S(7)/S(15)	7030	
2755	S(19) = S(16) + S(17) + S(18)	7030	
2756	S(20) = S(16)*S(12) + S(13) + S(17)*S(11) + S(13) +	7030	
2757	S(18)*S(11) + S(12)	7030	
2758	S(21) = S(18)*S(12)*S(13) + S(17)*S(11)*S(13) + S(18)*S(11)*S(12)	7030	
2759	IF(S(19)) 00,20,30	7030	
2760	30 S(22) = S(20)/S(12)/S(10)	7030	
2761	S(0) = (S(19)*S(22) - S(20)))/S(21) + S(21)	7030	
2762	IF(S(22) - S(1)) 31,100,100	7030	
2763	31 IF(S(22) - S(1)) 00,00,00	7030	
2764	00 IF(S(20)) 00,00,100	7030	
2765	00 S(4) = S(22)	7030	
2766	K = 1	7030	
2767	00 TO 1000	7030	
2768	00 K = 3	7030	



04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	*****	CONTENTS	*****
2040		IF(I1YF - 2) 50,50,100	7040
2041	C	FIGHTERS AND BOMBERS	7040
2042		50 J = FMT(91)	7040
2043		IF(S2(14)) 100,100,51	7040
2044		51 FMT(J+75) = S2(14)*EQUA(154)	7040
2045		FMT(J+1) = S2(142) + D(13)	7040
2046		FMT(91) = FMT(91) + D(1)	7040
2047		GO TO 200	7040
2048	C	TEST ON FORWARD RAMP (TRANSPORTS)	7040
2049		100 IF(SCST(17)) 150,150,102	7040
2050		102 J = FMT(91)	7040
2051		FMT(J+1) = SCST(67)	7040
2052		IF(SCDT(20)) 110,110,104	7040
2053		104 FMT(J+1) = SCST(67) + SCDT(20)/D(3)	7040
2054		GO TO 120	7040
2055		110 IF(SCDT(27)) 120,120,112	7040
2056		112 FMT(J+1) = SCST(67) + (SCDT(27)*D(17)+D(13))/D(3)	7040
2057	C	DETERMINE FUSELAGE GEOMETRY AT FRAME	7040
2058		120 I = 2	7040
2059		122 IF(XO(I) - FMT(J+1)) 124,130,130	7040
2060		124 I = I+1	7040
2061		IF(I - NC) 122,130,130	7040
2062		130 S(14) = PER(I-1) + (PER(I) - PER(I-1))*(FMT(J+1) - XO(I-1))/	7040
2063		(XO(I) - XO(I-1))	7040
2064		FMT(J+75) = S(14)*EQUA(157)	7040
2065		FMT(91) = FMT(91) + D(1)	7040
2066	C	TEST ON AFT RAMP	7040
2067		150 IF(SCST(19)) 200,200,152	7040
2068		152 J = FMT(91)	7040
2069		FMT(J+1) = SCST(63)	7040
2070		IF(SCDT(31)) 160,160,154	7040
2071		154 FMT(J+1) = SCST(63) + SCDT(31)/D(3)	7040
2072		GO TO 170	7040
2073		160 IF(SCDT(33)) 170,170,162	7040
2074		162 FMT(J+1) = SCST(63) + (SCDT(33)*D(17)+D(13))/D(3)	7040
2075		170 I = 2	7040
2076		172 IF(XO(I) - FMT(J+1)) 174,180,180	7040
2077		174 I = I+1	7040
2078		IF(I - NC) 172,180,180	7040
2079		180 S(14) = PER(I-1) + (PER(I) - PER(I-1))*(FMT(J+1) - XO(I-1))/	7040
2080		(XO(I) - XO(I-1))	7040
2081		FMT(J+75) = S(14)*EQUA(157)	7040
2082		FMT(91) = FMT(91) + D(1)	7040
2083		200 CONTINUE	7040
2084	C	*** EXIT ***	7040
2085		RETURN	7040
2086		END	7040
2087	C		
2088	C	*****	
2089	C	SUBROUTINE PART1	
2090	C	*****	
2091	C		
2092		SUBROUTINE PART1	7035
2093	C	WRITTEN 8 MARCH 1972	7035
2094	C	TO DEVELOP STATISTICAL WEIGHT ESTIMATES FOR PARTITIONS	7035
2095	C		7035
2096		COMMON TCOM(4400)	7035
2097	C		7035
2098		DIMENSION D(2000),T(2000),DC(100),ND(200)	7035
2099		DIMENSION WTCT(20),WTF(20)	7035
2100		DIMENSION WTP(20)	7035
2101		DIMENSION EQUA(160)	7035
2102	C		7035
2103		EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(2001)),(DC(1),TCOM(4101)),	7035
2104		(ND(1),TCOM(4201))	7035
2105	C		7035
2106		EQUIVALENCE (D(8),EQUA(1))	7035
2107		EQUIVALENCE (T(150),WTCT(1)),(T(160),WTF(1))	7035
2108		EQUIVALENCE (T(162),WTP(1))	7035
2109		EQUIVALENCE (ND(10),I)	7035
2110		EQUIVALENCE (ND(11),NC)	7035

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
2911	J = NC + 1		70410035
2912	DO 100 I=1,J		70410035
2913	WTP1(I) = IMTCT(I) + WTHF(I)*EQUA155		70410035
2914	100 CONTINUE		70410035
2915	RETURN		70410035
2916	END		70410035
2917	C		
2918	C *****		
2919	C SUBROUTINE SECOST		
2920	C *****		
2921	C		
2922	SUBROUTINE SECOST		70410000
2923	C WRITTEN 28 FEBRUARY 1972		70410020
2924	C TO DETERMINE SECONDARY STRUCTURE HEIGHTS		70410030
2925	C		70410040
2926	COMMON TCOM(400)		70410050
2927	C		70410060
2928	DIMENSION D(200),T(200),DC(100),ND(200)		70410070
2929	DIMENSION EQUA160(1),CIND(50)		70410080
2930	DIMENSION X(10)		70410090
2931	DIMENSION SCST(100),SCDT(80)		70410100
2932	DIMENSION S2(100)		70410110
2933	DIMENSION S(100),SS(20),TOT(20),SF(20)		70410120
2934	DIMENSION FHP(300)		70410130
2935	DIMENSION SCHT(50)		70410140
2936	C		70410150
2937	EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)),(DC(1),TCOM(400)),		70410160
2938	(ND(1),TCOM(400))		70410170
2939	EQUIVALENCE (D(81),EQUA1(1)),(D(241),CIND(1))		70410180
2940	EQUIVALENCE (D(291),X(1))		70410190
2941	EQUIVALENCE (D(821),SCST(1)),(D(921),SCDT(1))		70410200
2942	EQUIVALENCE (D(1001),S2(1))		70410210
2943	EQUIVALENCE (T(1),S(1)),(T(181),SS(1)),(T(201),TOT(1)),		70410220
2944	((T(401),SF(1))		70410230
2945	EQUIVALENCE (T(1201),FHP(1))		70410240
2946	EQUIVALENCE (T(1951),SCHT(1))		70410250
2947	EQUIVALENCE (ND(102),J)		70410260
2948	EQUIVALENCE (ND(111),NC), (ND(117),JAV), (ND(127),ITYP)		70410270
2949	C		70410280
2950	DO 10 J=1,50		70410290
2951	SCHT(J) = D(24)		70410300
2952	10 CONTINUE		70410310
2953	C VEHICLE TYPE HAS BEEN ESTABLISHED DETERMINE HEIGHTS		70410320
2954	IF (ITYP - 2) 110,110,130		70410330
2955	C CHECK CANOPY		70410340
2956	110 IF (SCST(1)) 130,130,111		70410350
2957	111 SCHT(1) = SCST(1)		70410360
2958	IF (SCST(1) - D(1)) 112,112,120		70410370
2959	C PILOTS CANOPY NOT INPUT - COMPUTE		70410380
2960	112 SCHT(1) = EQUA161		70410390
2961	IF (SCDT(1)) 120,120,113		70410400
2962	113 IF (CIND(27) - EQUA166) 114,114,115		70410410
2963	114 SCHT(1) = SCDT(1)*EQUA165		70410420
2964	GO TO 120		70410430
2965	115 SCHT(1) = SCDT(1)*(CIND(27)*EQUA164) - EQUA163		70410440
2966	C CHECK NAVIGATOR'S CANOPY		70410450
2967	120 IF (SCST(2)) 130,130,121		70410460
2968	121 SCHT(2) = SCST(2)		70410470
2969	IF (SCST(2) - D(1)) 122,122,130		70410480
2970	C NAVIGATOR'S CANOPY NOT INPUT COMPUTE		70410490
2971	122 SCHT(2) = EQUA162		70410500
2972	IF (SCDT(2)) 130,130,123		70410510
2973	123 IF (CIND(27) - EQUA166) 124,124,125		70410520
2974	124 SCHT(2) = SCDT(2)*EQUA165		70410530
2975	GO TO 130		70410540
2976	125 SCHT(2) = SCDT(2)*(CIND(27)*EQUA164) - EQUA163		70410550
2977	C TEST ON WINDSHIELD		70410560
2978	130 IF (ITYP - 1) 131,131,135		70410570
2979	131 SCHT(3) = SCST(3)		70410580
2980	IF (SCST(3) - D(1)) 132,132,180		70410590
2981	132 IF (SCDT(3)) 133,133,139		70410600

04/10 74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
2982	133 SCHT(3) = EQUI(75)		70410610
2983	GO TO 160		70410620
2984	C BOMBER OR TRANSPORT		70410630
2985	135 IF(ITYP - 2) 136,136,150		70410640
2986	C BOMBER TYPE		70410650
2987	136 SCHT(3) = SCST(3)		70410660
2988	IF(SCST(3) - D(1)) 137,137,160		70410670
2989	137 IF(SCDT(3)) 138,138,139		70410680
2990	138 SCHT(3) = EQUI(76)		70410690
2991	GO TO 160		70410700
2992	C CALCULATE		70410710
2993	139 IF(SCDT(6)) 145,145,140		70410720
2994	C BIRD IMPACT		70410730
2995	140 S(1) = EQUI(50)*CIND(126)		70410740
2996	S(2) = EQUI(68)*D(1) + EQUI(69)*COS(SCDT(6)*D(16))		70410750
2997	I EXP(S(1)*COS(SCDT(6)*D(16)) - EQUI(73))		70410760
2998	143 IF(S(2) - EQUI(74)) 141,142,142		70410770
2999	141 S(2) = EQUI(74)		70410780
3000	142 SCHT(3) = S(2)*SCDT(3)*CDT(4)*EQUI(70)*SCDT(5)		70410790
3001	GO TO 160		70410800
3002	C PRESSURE		70410810
3003	145 S(3) = EQUI(71) - EQUI(72)*SCDT(3)/SCDT(4)		70410820
3004	S(2) = (D(6)*S(3)*CIND(28)*SCDT(4)**2*D(30)*D(38)/EQUI(67))**5		70410830
3005	GO TO 143		70410840
3006	C TRANSPORT TYPE		70410850
3007	150 SCHT(3) = SCST(3)		70410860
3008	IF(SCST(3) - D(1)) 151,151,160		70410870
3009	151 IF(SCDT(3)) 152,152,139		70410880
3010	152 J = IAV - 30		70410890
3011	C J = TRANSPORT CLASS TYPES		70410900
3012	GO TO 153,154,153,154,154,155,J		70410910
3013	153 SCHT(3) = EQUI(76)		70410920
3014	GO TO 160		70410930
3015	154 SCHT(3) = EQUI(77)		70410940
3016	GO TO 160		70410950
3017	155 SCHT(3) = EQUI(78)		70410960
3018	C CHECK WINDOWS AND PORTS		70410970
3019	C THERE IS NO RULE OF THUMB FOR THIS ITEM - MUST BE DEFINED		70410980
3020	160 IF(SCST(4)) 170,170,161		70410990
3021	161 SCHT(4) = SCST(4)		70411000
3022	IF(SCST(4) - D(1)) 162,162,170		70411010
3023	C TEST FOR INPUT DESCRIPTION		70411020
3024	162 IF(SCDT(7)) 163,163,164		70411030
3025	C WRITE ERROR MESSAGE		70411040
3026	163 WRITE(6,60)		70411050
3027	60 FORMAT(1H,20X,23H*** WARNING MESSAGE ***10X,		70411060
3028	164WINDOWS AND PORTS RULE OF THUMB IS NOT WITHIN PROGRAM CAPABILITY12,127,		
3029	GO TO 170		70411080
3030	164 IF(SCDT(4)) 163,163,165		70411090
3031	165 S(3) = EQUI(71) - EQUI(72)*SCDT(7)/SCDT(8)		70411100
3032	S(2) = (D(6)*S(3)*CIND(28)*SCDT(8)**2*D(30)*D(38)/EQUI(67))**5		70411110
3033	IF(S(2) - EQUI(74)) 166,167,167		70411120
3034	166 S(2) = EQUI(74)		70411130
3035	167 SCHT(4) = S(2)*SCDT(7)*SCDT(8)*EQUI(70)*SCDT(9)		70411140
3036	C WINDOWS AND PORTS CABIN		70411150
3037	170 IF(SCST(5)) 180,180,171		70411160
3038	171 SCHT(5) = SCST(5)		70411170
3039	IF(SCST(5) - D(1)) 172,172,180		70411180
3040	172 IF(SCDT(11)) 179,179,173		70411190
3041	173 IF(SCDT(12)) 174,174,175		70411200
3042	174 WRITE(6,60)		70411210
3043	GO TO 180		70411220
3044	175 S(3) = EQUI(71) - EQUI(72)*SCDT(11)/SCDT(12)		70411230
3045	S(2) = (D(6)*S(3)*CIND(28)*SCDT(11)**2*D(30)*D(38)/EQUI(67))**5		70411240
3046	IF(S(2) - EQUI(74)) 176,177,177		70411250
3047	176 S(2) = EQUI(74)		70411260
3048	177 SCHT(5) = S(2)*SCDT(11)*SCDT(12)*EQUI(70)*SCDT(13)		70411270
3049	GO TO 180		70411280
3050	179 SCHT(5) = SCST(13)*EQUI(80)		70411290
3051	C FLOORING AND SUPPORT COCKPIT OR FLIGHT DECK		70411300
3052	180 IF(SCST(6)) 190,190,181		70411310



04/18/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECURE FUELAGE OVERLAY
CARD NO	CONTENTS		
3053	101 SCOT(6) = SCST(6)		70411315
3054	IF(SCST(6) - 0(1)) 102,102,100		70411320
3055	102 IF(SCDT(10)) 104,104,103		70411330
3056	103 SCST(6) = SCDT(15)*EQUA(82)		70411340
3057	GO TO 100		70411350
3058	104 IF(ITYP - 1) 105,105,109		70411360
3059	C CREW FLOORING CLIMBERS		70411370
3060	105 SCST(6) = S2(14)*AJA(81)		70411380
3061	GO TO 100		70411390
3062	C CREW FLOORING BOMBERS AND TRANSPORTS		70411400
3063	106 SCST(6) = ((TOT(19) + TOT(20))/D(2)/D(12)/EQUA(83))*EQUA(84)*EQUA(85)*S2(14)		70411410
3064	GO TO 100		70411420
3065	C STAIRWAY AND LADDERS		70411430
3066	106 IF(SCST(7)) 200,200,191		70411440
3067	101 SCST(7) = SCST(7)		70411450
3068	IF(SCST(7) - 0(1)) 102,102,200		70411460
3069	102 IF(ITYP - 1) 103,103,105		70411470
3070	C FIGHTERS		70411480
3071	103 SCST(7) = EQUA(86)		70411490
3072	GO TO 200		70411500
3073	C BOMBERS AND TRANSPORTS		70411510
3074	105 S(1) = TOT(19)/D(12) - EQUA(88)		70411520
3075	IF(S(1)) 106,107,107		70411530
3076	106 S(1) = 0(24)		70411540
3077	107 SCST(7) = EQUA(87) + S(1)*EQUA(88)		70411550
3078	C NOSE RADOME		70411560
3079	200 IF(SCST(8)) 210,210,201		70411570
3080	201 SCST(8) = SCST(8)		70411580
3081	IF(SCST(8) - 0(1)) 202,202,210		70411590
3082	202 IF(CIND(21) - 0(1)) 203,206,206		70411600
3083	C SUBSONIC		70411610
3084	203 IF(SCDT(16)) 204,204,205		70411620
3085	204 SCST(8) = EQUA(92)*SF(1)/D(17)		70411630
3086	GO TO 210		70411640
3087	205 SCST(8) = EQUA(92)*SCDT(16)		70411650
3088	GO TO 210		70411660
3089	C SUPERSONIC		70411670
3090	206 IF(SCDT(16)) 207,207,208		70411680
3091	207 SCST(8) = EQUA(90)*SF(1)/D(17)		70411690
3092	GO TO 210		70411700
3093	208 SCST(8) = EQUA(90)*SCDT(16)		70411710
3094	C TAIL RADOME		70411720
3095	210 IF(SCST(9)) 220,220,211		70411730
3096	211 SCST(9) = SCST(9)		70411740
3097	IF(SCST(9) - 0(1)) 212,212,220		70411750
3098	212 IF(CIND(21) - 0(1)) 213,213,216		70411760
3099	C SUBSONIC		70411770
3100	213 IF(SCDT(17)) 214,214,215		70411780
3101	214 SCST(9) = EQUA(92)*SF(1)/D(17)		70411790
3102	GO TO 220		70411800
3103	215 SCST(9) = EQUA(92)*SCDT(17)		70411810
3104	GO TO 220		70411820
3105	C SUPERSONIC		70411830
3106	216 IF(SCDT(17)) 217,217,218		70411840
3107	217 SCST(9) = EQUA(91)*SF(1)/D(17)		70411850
3108	GO TO 220		70411860
3109	218 SCST(9) = EQUA(91)*SCDT(17)		70411870
3110	C MISCELLANEOUS RADOMES		70411880
3111	220 IF(SCST(10)) 230,230,221		70411890
3112	221 SCST(10) = SCST(10)		70411900
3113	IF(SCST(10) - 0(1)) 222,222,230		70411910
3114	222 SCST(10) = EQUA(92)*SCDT(18)		70411920
3115	C SPEED BRAKES		70411930
3116	230 IF(SCST(11)) 250,250,231		70411940
3117	231 SCST(11) = SCST(11)		70411950
3118	IF(SCST(11) - 0(1)) 232,232,250		70411960
3119	232 IF(SCDT(18)) 233,233,237		70411970
3120	233 IF(SCDT(21)) 250,250,234		70411980
3121	234 IF(SCDT(20)) 235,235,236		70411990
3122	235 SCST(20) = (SCDT(21)/EQUA(86)*D(17))^*.5		70412000
3123	SCST(18) = EQUA(98)*SCDT(20)		70412010

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CARD NO	****	CONTENTS	****
3124	00 TO 245		70411050
3125	230 SCOT(19) = SCOT(21)/SCOT(20)*D(17)		70411070
3126	00 TO 245		70411080
3127	237 IF(SCST(21)) 230,230,230		70411090
3128	230 IF(SCST(20)) 250,250,240		70411100
3129	240 SCOT(21) = SCOT(19)*SCOT(20)/D(17)		70411110
3130	00 TO 245		70411120
3131	230 IF(SCST(20)) 241,241,245		70411130
3132	241 SCOT(20) = SCOT(21)/SCOT(19)*D(17)		70411140
3133	245 S(11) = EQUA(93) + EQUA(94)/D(14)*CIND(27)/D(17)*SCOT(20)*		70411150
3134	SCOT(19)**2		70411160
3135	SCMT(11) = SCOT(21)*S(11)*EQUA(95)		70411170
3136	C OTHER AN-8103-D PAGE 9		70411180
3137	250 IF(SCST(12)) 260,260,251		70411190
3138	251 SCMT(12) = SCST(12)		70412000
3139	C MAIN GEAR DOOR		70412010
3140	260 IF(SCST(13)) 270,270,261		70412020
3141	261 SCMT(13) = SCST(13)		70412030
3142	IF(SCST(13) - D(11)) 262,262,270		70412040
3143	262 SCMT(13) = SCOT(23)*EQUA(97)		70412050
3144	C NOSE GEAR DOOR		70412060
3145	270 IF(SCST(14)) 280,280,271		70412070
3146	271 SCMT(14) = SCST(14)		70412080
3147	IF(SCST(14) - D(11)) 272,272,280		70412090
3148	272 SCMT(14) = SCOT(24)*EQUA(98)		70412100
3149	C CARGO DOOR AFT		70412110
3150	280 IF(SCST(15)) 290,290,291		70412120
3151	291 SCMT(15) = SCST(15)		70412130
3152	IF(SCST(15) - D(11)) 292,292,290		70412140
3153	292 SCMT(15) = SCOT(25)*EQUA(99)		70412150
3154	C SIDE CARGO DOOR		70412160
3155	290 IF(SCST(16)) 300,300,291		70412170
3156	291 SCMT(16) = SCST(16)		70412180
3157	IF(SCST(16) - D(11)) 292,292,300		70412190
3158	292 SCMT(16) = SCOT(26)*EQUA(100)		70412200
3159	C FORWARD RAMP		70412210
3160	300 IF(SCST(17)) 320,320,301		70412220
3161	301 SCMT(17) = SCST(17)		70412230
3162	IF(SCST(17) - D(11)) 302,302,310		70412240
3163	302 IF(SCOT(20)) 303,303,304		70412250
3164	303 SCMT(17) = SCOT(27)*EQUA(102)		70412260
3165	00 TO 310		70412270
3166	304 SCMT(17) = SCOT(27)*SCOT(28)/D(12)*EQUA(103)		70412280
3167	C FORWARD RAMP TOE		70412290
3168	310 IF(SCST(18)) 320,320,311		70412300
3169	311 SCMT(18) = SCST(18)		70412310
3170	IF(SCST(18) - D(11)) 313,313,320		70412320
3171	313 SCMT(18) = SCOT(29)*EQUA(104)		70412330
3172	C AFT RAMP		70412340
3173	320 IF(SCST(19)) 340,340,321		70412350
3174	321 SCMT(19) = SCST(19)		70412360
3175	IF(SCST(19) - D(11)) 322,322,330		70412370
3176	322 IF(SCOT(31)) 323,323,324		70412380
3177	323 SCMT(19) = SCOT(30)*EQUA(102)		70412390
3178	00 TO 330		70412400
3179	324 SCMT(19) = SCOT(30)*SCOT(31)/D(12)*EQUA(103)		70412410
3180	C AFT RAMP TOE		70412420
3181	330 IF(SCST(20)) 340,340,331		70412430
3182	331 SCMT(20) = SCST(20)		70412440
3183	IF(SCST(20) - D(11)) 332,332,340		70412450
3184	332 SCMT(20) = SCOT(32)*EQUA(104)		70412460
3185	C PRESSURE DOOR		70412470
3186	340 IF(SCST(21)) 350,350,341		70412480
3187	341 SCMT(21) = SCST(21)		70412490
3188	IF(SCST(21) - D(11)) 342,342,350		70412500
3189	342 IF(SCOT(33)) 343,343,340		70412510
3190	343 IF(SCOT(34)) 350,350,344		70412520
3191	344 IF(SCOT(35)) 350,350,345		70412530
3192	345 SCOT(33) = SCOT(34)*SCOT(35)/D(17)		70412540
3193	00 TO 340		70412550
3194	346 IF(SCOT(36)) 347,347,340		70412560

IN/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
3195	347 SCMT(21) = SCOT(33)*EQUA(109)		70412570
3196	GO TO 360		70412580
3197	348 IF(SCOT(35)) 347,347,348		70412590
3198	349 S(1) = SCOT(34)		70412600
3199	95(2) = SCOT(35)		70412610
3200	95(3) = CIND(28)		70412620
3201	S(4) = D(24)		70412630
3202	95(5) = D(30)*D(38)		70412640
3203	95(6) = FWP(266)*FWP(252)		70412650
3204	S(1) = FWP(252)/95(5)		70412660
3205	IF(S(1) - 95(6)) 357,358,359		70412670
3206	357 95(6) = S(1)		70412680
3207	358 95(7) = FWP(246)		70412690
3208	95(8) = FWP(245)		70412700
3209	CALL DELMOD		70412710
3210	SCMT(21) = SCOT(33)*D(17)*95(10)*FWP(251)*EQUA(106)		70412720
3211	C BOMB BAY DOORS		70412730
3212	350 IF(SCST(22)) 360,360,351		70412740
3213	351 SCMT(22) = SCST(22)		70412750
3214	IF(SCST(22) - D(1)) 352,352,360		70412760
3215	352 S(1) = EQUA(107) + EQUA(108)*CIND(27)		70412770
3216	IF(SCOT(36) - D(2)) 353,354,355		70412780
3217	353 SCMT(22) = SCOT(37)*S(1)*EQUA(109)		70412790
3218	GO TO 360		70412800
3219	354 SCMT(22) = SCOT(37)*S(1)*EQUA(110)		70412810
3220	GO TO 360		70412820
3221	355 SCMT(22) = SCOT(37)*S(1)*EQUA(111)		70412830
3222	C GUN ACCESS DOORS		70412840
3223	360 IF(SCST(23)) 370,370,361		70412850
3224	361 SCMT(23) = SCST(23)		70412860
3225	IF(SCST(23) - D(1)) 362,362,370		70412870
3226	362 SCMT(23) = SCOT(38)*EQUA(112)		70412880
3227	C AHD ACCESS DOORS		70412890
3228	370 IF(SCST(24)) 380,380,371		70412900
3229	371 SCMT(24) = SCST(24)		70412910
3230	IF(SCST(24) - D(1)) 372,372,380		70412920
3231	372 SCMT(24) = SCOT(39)*EQUA(113)		70412930
3232	C EMERGENCY EXIT IN FLIGHT		70412940
3233	380 IF(ITYP - 2) 381,381,380		70412950
3234	C FIGHTERS AND BOMBERS		70412960
3235	381 IF(SCST(1)) 382,382,400		70412970
3236	382 IF(SCST(25)) 400,400,383		70412980
3237	383 SCMT(25) = SCST(25)		70412990
3238	IF(SCST(25) - D(1)) 384,384,400		70413000
3239	384 IF(SCOT(40)) 385,385,386		70413010
3240	385 SCMT(25) = S(14)*EQUA(114)		70413020
3241	GO TO 410		70413030
3242	386 SCMT(25) = SCOT(40)*SCOT(41)*EQUA(115)		70413040
3243	GO TO 410		70413050
3244	C TRANSPORT - FLIGHT		70413060
3245	380 IF(SCST(25)) 400,400,391		70413070
3246	391 SCMT(25) = SCST(25)		70413080
3247	IF(SCST(25) - D(1)) 382,382,400		70413090
3248	382 IF(SCOT(41)) 383,383,394		70413100
3249	383 SCOT(41) = D(1)		70413110
3250	394 IF(SCOT(40)) 395,395,396		70413120
3251	395 SCMT(25) = SCOT(41)*EQUA(116)		70413130
3252	GO TO 400		70413140
3253	386 SCMT(25) = SCOT(40)*SCOT(41)*EQUA(116)		70413150
3254	C BOMBERS AND TRANSPORTS		70413160
3255	400 IF(ITYP - 2) 410,401,401		70413170
3256	401 IF(SCST(26)) 410,410,402		70413180
3257	402 SCMT(26) = SCST(26)		70413190
3258	IF(SCST(26) - D(1)) 403,403,410		70413200
3259	403 IF(SCOT(43)) 404,404,405		70413210
3260	404 SCOT(43) = D(1)		70413220
3261	405 IF(SCOT(42)) 406,406,407		70413230
3262	406 SCMT(26) = SCOT(43)*EQUA(118)		70413240
3263	GO TO 410		70413250
3264	407 SCMT(26) = SCOT(40)*SCOT(43)*EQUA(117)		70413260
3265	C PARATROOP DOOR		70413270

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CARD NO	****	CONTENTS	****
3266	410 IF(SCST(27)) 430,430,411		70413200
3267	411 SCHT(27) = SCST(27)		70413200
3268	IF(SCST(27) - D(1)) 412,412,420		70413300
3269	412 IF(SCOT(45)) 413,413,414		70413310
3270	413 SCOT(45) = D(1)		70413320
3271	414 IF(SCOT(44)) 416,416,417		70413330
3272	416 SCHT(27) = SCOT(45)*EQUA(21)		70413340
3273	GO TO 420		70413350
3274	417 SCHT(27) = SCOT(44)*SCOT(45)*EQUA(122)		70413360
3275	C SPOILER DEFLECTORS		70413370
3276	420 IF(SCST(28)) 430,430,421		70413380
3277	421 SCHT(28) = SCST(28)		70413390
3278	IF(SCST(28) - D(1)) 422,422,430		70413400
3279	422 IF(SCOT(45)) 423,423,424		70413410
3280	423 SCOT(45) = D(1)		70413420
3281	424 SCHT(28) = SCOT(45)*EQUA(123)		70413430
3282	C ENTRANCE DOOR		70413440
3283	430 IF(SCST(29)) 440,440,431		70413450
3284	431 SCHT(29) = SCST(29)		70413460
3285	IF(SCST(29) - D(1)) 432,432,440		70413470
3286	432 IF(SCOT(47)) 433,433,434		70413480
3287	433 SCOT(47) = D(1)		70413490
3288	434 IF(SCOT(48)) 435,435,436		70413500
3289	435 SCHT(29) = SCOT(47)*EQUA(124)		70413510
3290	GO TO 440		70413520
3291	436 SCHT(29) = SCOT(46)*SCOT(47)*EQUA(125)		70413530
3292	C MISCELLANEOUS ACCESS DOORS		70413540
3293	440 IF(SCST(30)) 450,450,441		70413550
3294	441 SCHT(30) = SCST(30)		70413560
3295	IF(SCST(30) - D(1)) 442,442,450		70413570
3296	442 IF(117P - 2) 443,443,445		70413580
3297	C FIGHTERS AND BOMBERS		70413590
3298	443 S(1) = TOT(1)/D(17)		70413600
3299	IF(S(1) - D(13)*D(13)) 450,450,444		70413610
3300	444 SCHT(30) = EQUA(126)*LOG10(S(1)) - EQUA(127)		70413620
3301	GO TO 450		70413630
3302	C TRANSPOPS		70413640
3303	445 SCHT(30) = EQUA(128)*(TOT(1)/D(17))*EQUA(129)		70413650
3304	C IN FLIGHT REFUELING		70413660
3305	450 IF(SCST(31)) 460,460,451		70413670
3306	451 SCHT(31) = SCST(31)		70413680
3307	IF(SCST(31) - D(1)) 462,462,460		70413690
3308	462 IF(SCOT(48) - D(2)) 453,454,455		70413700
3309	453 SCHT(31) = EQUA(130)		70413710
3310	GO TO 460		70413720
3311	454 SCHT(31) = EQUA(131)		70413730
3312	GO TO 460		70413740
3313	455 SCHT(31) = EQUA(130) + EQUA(131)		70413750
3314	C RAM AIR TURBINE		70413760
3315	460 IF(SCST(32)) 470,470,461		70413770
3316	461 SCHT(32) = SCST(32)		70413780
3317	IF(SCST(32) - D(1)) 462,462,470		70413790
3318	462 IF(SCOT(49)) 463,463,464		70413800
3319	463 SCHT(32) = EQUA(132)		70413810
3320	GO TO 470		70413820
3321	464 SCHT(32) = SCOT(48)*EQUA(133)		70413830
3322	C ENGINE REMOVAL DOORS		70413840
3323	470 IF(SCST(33)) 480,480,471		70413850
3324	471 SCHT(33) = SCST(33)		70413860
3325	IF(SCST(33) - D(1)) 472,472,480		70413870
3326	472 IF(SCOT(50)) 473,473,479		70413880
3327	473 S(1) = S2(145) + S2(146)		70413890
3328	S(2) = S2(146)		70413900
3329	IF(X(18) - S(1)) 474,474,475		70413910
3330	474 S(2) = X(18) - S2(145)		70413920
3331	475 SCOT(50) = (S2(144) + EQUA(135))*S(2)*S2(143)/D(17)		70413930
3332	476 SCHT(33) = EQUA(134)*SCOT(50)		70413940
3333	C ACCESSORY ACCESS		70413950
3334	480 IF(SCST(34)) 490,490,481		70413960
3335	481 SCHT(34) = SCST(34)		70413970
3336	IF(SCST(34) - D(1)) 482,482,490		70413980

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CARD NO	****	CONTENTS	****
3337	462 IF(SCDT(51)) 463,463,465		70413980
3338	463 SCDT(51) = (521144) + (EQUA(135))**2*(521143)/D(17)		70414000
3339	465 SCMT(34) = SCDT(51)*EQUA(136)		70414010
3340	C THERMAL PROTECTION		70414020
3341	466 IF(SCST(35)) 500,500,461		70414030
3342	461 SCMT(35) = SCST(35)		70414040
3343	IF(SCST(35) - D(1)) 462,462,500		70414050
3344	462 IF(SCDT(62)) 500,500,463		70414060
3345	463 SCMT(35) = SCDT(62)*EQUA(137)		70414070
3346	C MAIN LANDING GEAR POD		70414080
3347	500 IF(SCST(36)) 510,510,501		70414090
3348	501 SCMT(36) = SCST(36)		70414100
3349	IF(SCST(36) - D(1)) 502,502,510		70414110
3350	502 IF(SCDT(53)) 510,510,503		70414120
3351	503 SCMT(36) = (SCDT(53) - SCDT(23))*EQUA(138)		70414130
3352	C MISCELLANEOUS FAIRINGS		70414140
3353	510 IF(SCST(37)) 520,520,511		70414150
3354	511 SCMT(37) = SCST(37)		70414160
3355	IF(SCST(37) - D(1)) 512,512,520		70414170
3356	512 IF(SCDT(94)) 513,513,515		70414180
3357	513 SCMT(37) = 521147)*EQUA(140)		70414190
3358	60 TO 520		70414200
3359	515 SCMT(37) = SCDT(94)*EQUA(139)		70414210
3360	C DORSAL		70414220
3361	520 IF(SCST(38)) 530,530,521		70414230
3362	521 SCMT(38) = SCST(38)		70414240
3363	IF(SCST(38) - D(1)) 522,522,530		70414250
3364	522 IF(SCDT(95)) 530,530,523		70414260
3365	523 SCMT(38) = SCDT(95)*EQUA(139)		70414270
3366	C MAINWAYS STEPS AND GRIPS		70414280
3367	530 IF(SCST(39)) 550,550,531		70414290
3368	531 SCMT(39) = SCST(39)		70414300
3369	IF(SCST(39) - D(1)) 532,532,540		70414310
3370	532 IF(SCDT(96)) 540,540,533		70414320
3371	533 IF(SCDT(57)) 534,534,535		70414330
3372	534 SCDT(57) = D(1)		70414340
3373	535 SCMT(39) = SCDT(56)*SCDT(57)*EQUA(141)		70414350
3374	C ANTI-SKID PROTECTION		70414360
3375	540 IF(SCST(40)) 950,950,541		70414370
3376	541 SCMT(40) = SCST(40)		70414380
3377	IF(SCST(40) - D(1)) 542,542,950		70414390
3378	542 IF(SCDT(96)) 950,950,543		70414400
3379	543 SCMT(40) = SCDT(56)*SCDT(57)*EQUA(142)		70414410
3380	C EXTERIOR FINISH		70414420
3381	950 IF(SCST(41)) 960,960,951		70414430
3382	951 SCMT(41) = SCST(41)		70414440
3383	IF(SCST(41) - D(1)) 952,952,960		70414450
3384	952 SCMT(41) = TOT(1)/D(17)*EQUA(143)		70414460
3385	C INTERIOR FINISH		70414470
3386	960 IF(SCST(42)) 570,570,961		70414480
3387	961 SCMT(42) = SCST(42)		70414490
3388	IF(SCST(42) - D(1)) 962,962,570		70414500
3389	962 SCMT(42) = TOT(1)/D(17)*EQUA(144)		70414510
3390	C END SECONDARY STRUCTURE		70414520
3391	C DO CARGO FLOORS IF ANY		70414530
3392	570 IF(117) - 2) 1000,1000,579		70414540
3393	579 IF(SCST(43)) 1000,1000,571		70414550
3394	571 SCMT(43) = SCST(43)		70414560
3395	IF(SCST(43) - D(1)) 572,572,1000		70414570
3396	572 J = 1AN - 30		70414580
3397	S(1) = TOT(20)/D(12)*EQUA(145)		70414590
3398	IF(S(1) - D(1)) 573,573,574		70414600
3399	573 S(1) = D(1)		70414610
3400	574 60 TO 1575,575,576,576,577,577),J		70414620
3401	C WHEELED VEHICLE FLOOR		70414630
3402	575 SCMT(43) = SCDT(56)*EQUA(146)*S(1)*EQUA(145)		70414640
3403	60 TO 1000		70414650
3404	C BULK CARGO FLOOR		70414660
3405	576 SCMT(43) = SCDT(56)*EQUA(147)*S(1)*EQUA(145)		70414670
3406	60 TO 1000		70414680
3407	C PARBENDER FLOOR		70414690

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04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
3470		EQUIVALENCE (T1221),Z0111), (T1241),ACU111), (T1261),ACL111),	70440530
3480		11T1281),ACS111), (T1301),BU111), (T1321),BL111), (T1341),BS111),	70440540
3481		21T1361),HAR111), (T1381),DELX111), (T1401),SF111),	70440550
3482		31T1421),VOL111), (T1441),DOO111), (T1461),MO111), (T1481),RO111),	70440560
3483		41T1541),PER111), (T1561),UIX111), (T1581),UIV111), (T1601),UIZ111)	70440570
3484		EQUIVALENCE (T1621),TCU111), (T1641),TCS111), (T1661),TCL111),	70440580
3485		11T1681),TLU111), (T1701),TLS111), (T1721),TLL111),	70440590
3486		21T1741),TCF111), (T1761),TOJF111), (T1781),TOJAK111),	70440600
3487		31T1801),ALU111), (T1821),ALL111), (T1841),ALS111),	70440610
3488		41T1861),AIT111), (T1881),SRM111), (T1901),STND111),	70440620
3489		51T1921),BSTR111)	70440630
3490		EQUIVALENCE (T1921),FMP111)	70440635
3491		EQUIVALENCE (T1981),MTCU111), (T1991),MTC5111),	70440640
3492		11T1941),MTC111), (T1961),MTC111)	70440650
3493		EQUIVALENCE (T1981),MTLU111), (T1991),MTLS111),	70440660
3494		11T1921),MTLL111), (T1941),MTS111), (T1961),MTLT111)	70440670
3495		EQUIVALENCE (T1981),MTWF111), (T1991),MTJS111)	70440680
3496		EQUIVALENCE (T1991),MTBK111), (T1991),MTP111)	70440690
3497		EQUIVALENCE (T1991),SCHT111)	70440700
3498		EQUIVALENCE (TCON4001),SUPP111)	70440710
3499		EQUIVALENCE (ND150),MPAGE)	70440720
3500		EQUIVALENCE (ND1101),I), (ND1102),J), (ND1111),MC)	70440730
3501		EQUIVALENCE (ND1103),K), (ND1106),N)	70440740
3502		EQUIVALENCE (ND1141),I1111), (ND1181),I2111), (ND1181),I3111)	70440750
3503	C		70440760
3504		IF (IP1001)5001,5001,5002	
3505	5001 CONTINUE		
3506	C		70440770
3507		WRITE(6,05)	70440780
3508		05 FORMAT(1H1,3X,30H*** GENERAL CONSTRUCTION INDICATORS ***.14X,	70440800
3509		1 21H** SPRINT - (P100) **)	
3510		WRITE(6,06) (CIND(J),J=1,17)	70440820
3511		06 FORMAT(1H0,20X,12HVEHICLE TYPE,10X,F0.1/20X,	70440830
3512		11HNUMBER OF CUTS,10X,F0.1/20X,	70440840
3513		21HSHAPE CODE,20X,F0.1/20X,	70440850
3514		31HCONSTRUCTION TYPE,13X,F0.1/20X,	70440860
3515		42HCOVER DESIGN INDICATOR,0X,F0.1/20X,	70440870
3516		52HCOVER MATERIAL NUMBER,0X,F0.1/20X,	70440880
3517		62HLONGERON MATERIAL NUMBER,0X,F0.1/20X,	70440890
3518		72HMAJOR FRAME MATERIAL NUMBER,3X,F0.1/20X,	70440900
3519		82HMINOR FRAME MATERIAL NUMBER,3X,F0.1/20X,	70440910
3520		91HSPRINT CODE,20X,F0.1/20X,	70440920
3521		12HNUMBER OF PRIMARY LONGERONS,3X,F0.1/20X,	70440930
3522		22HNUMBER OF SECONDARY LONGERONS,1X,F0.1/20X,	70440940
3523		32HGENERAL DEPTH RATIO - LONGS,3X,F0.1/20X,	70440950
3524		42HNUMBER OF SHOUL RADII,0X,F0.1/20X,	70440960
3525		51HSTRIDER SPACING,14X,F0.1/20X,	70440970
3526		61HGENERAL FRAME DEPTH,11X,F0.1/20X,	70440980
3527		70HGENERAL FRAME SPACING,0X,F0.1)	70440990
3528		WRITE(6,08) CIND(31),CIND(32),CIND(33),CIND(34),CIND(35),CIND(36)	70440991
3529		08 FORMAT(20X,10HCOVER INDEX FACTOR,12X,F12.4/20X,	70440992
3530		1 21HLONGERON INDEX FACTOR,0X,F12.4/20X,	70440993
3531		2 10HJF INDEX FACTOR,14X,F12.4/20X,	70440994
3532		3 22HMINOR FRAME INDEX FACTOR,0X,F12.4/20X,	70440995
3533		4 22HMAJOR FRAME INDEX FACTOR,0X,F12.4/20X,	70440996
3534		5 21HSHOULDEAD INDEX FACTOR,0X,F12.4)	70440997
3535		WRITE(6,07) CIND(21),CIND(22),CIND(23),CIND(24),CIND(25)	70441000
3536		07 FORMAT(1/20X,24HLOCAL PANEL FLUTTER DATA/20X,	70441010
3537		91HINCH NUMBER,10X,F10.2/20X,	70441020
3538		10HMULTITUDE,0X,F0.1/20X,	70441030
3539		21HDYNAMIC PRESSURE,14X,F0.1/20X,	70441040
3540		32HCOVER MODULUS OF ELASTICITY,7X,F12.4/20X,	70441050
3541		42HSECTION OF HATCH NUMBER,0X,F11.4)	70441060
3542		WRITE(6,09) CIND(26),CIND(27),CIND(28)	70441070
3543		09 FORMAT(1/20X,28HADDITIONAL DESIGN DATA/20X,	70441080
3544		123HMAXIMUM SEA LEVEL SPEED,7X,F10.2/20X,	70441090
3545		22HMINIMUM DYNAMIC PRESSURE,0X,F0.1/20X,	70441100
3546		22HMINUT CABIN PRESSURE,10X,F10.2)	70441110
3547	C		70441120
3548	C		70441130
3549		WRITE(6,130)	70441150

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CARD NO	****	CONTENTS	****
3950	130 FORMAT(1M1,40X,20X)*** BASIC VEHICLE DATA ***.22X.		70441160
3951	1 21M** SPRINT - (P100) **		
3952	WRITE(6,132) S21(41)		70441170
3953	132 FORMAT(//20X,20X)NUMBER OF CREW MEMBERS,8X,F9.1)		70441180
3954	WRITE(6,134) S21(43)		70441190
3955	134 FORMAT(20X,170X)NUMBER OF ENGINES,13X,F9.1)		70441200
3956	IF(S21(43)) 137,137,135		70441210
3957	135 WRITE(6,136) S21(44),S21(45),S21(46)		70441220
3958	136 FORMAT(20X,15X)ENGINE DIAMETER,15X,F9.1/20X,		70441230
3959	117ENGINE FRONT FACE,13X,F9.1/20X,		70441240
3960	21ENGINE LENGTH,17X,F9.1)		70441250
3961	137 WRITE(6,138) S21(47),S21(11)		70441260
3962	138 FORMAT(20X,20X)WING CHORD - SIDE OF FUSELAGE,F10.1/20X,		70441270
3963	18WING APEX,21X,F9.1)		70441280
3964	WRITE(6,140)		70441290
3965	140 FORMAT(//35X,8X)INDICATOR,3X,12X-COORDINATE,3X,10X-SIDE FUS,		70441300
3966	13X,10X-SIDE FUS)		70441310
3967	WRITE(6,141) S21(17),S21(15),S21(16)		70441320
3968	141 FORMAT (15X,8X)WING DATA,10X,F7.1,10X,F9.1,4X,F9.1)		70441330
3969	WRITE(6,142) S21(2)		70441340
3970	142 FORMAT (18X,10X)FRONT SPAR,18X,F9.1)		70441350
3971	WRITE(6,143) S21(3)		70441360
3972	143 FORMAT (18X,8X)REAR SPAR,18X,F9.1)		70441370
3973	WRITE(6,144) S21(4)		70441380
3974	144 FORMAT (18X,8X)INT. SPAR,18X,F9.1)		70441390
3975	WRITE(6,145) S21(12),S21(10),S21(11)		70441400
3976	145 FORMAT (15X,20X)HORIZONTAL TAIL DATA,F8.1,10X,F9.1,4X,F9.1)		70441410
3977	WRITE(6,142) S21(8)		70441420
3978	WRITE(6,143) S21(9)		70441430
3979	WRITE(6,146) S21(17),S21(15),S21(16)		70441440
3980	146 FORMAT (15X,18X)VERTICAL TAIL DATA,F8.1,10X,F9.1,4X,F9.1)		70441450
3981	WRITE(6,142) S21(13)		70441460
3982	WRITE(6,143) S21(14)		70441470
3983	WRITE(6,147) S21(20),S21(21)		70441480
3984	147 FORMAT (15X,12X)ACELLE DATA,33X,F9.1,4X,F9.1)		70441490
3985	WRITE(6,148) S21(18)		70441500
3986	148 FORMAT (18X,15X)FORWARD SUPPORT,13X,F9.1)		70441510
3987	WRITE(6,149) S21(19)		70441520
3988	149 FORMAT (18X,11X)AFT SUPPORT,17X,F9.1)		70441530
3989	WRITE(6,150) S21(24),S21(25)		70441540
3990	150 FORMAT (15X,17X)STORES AND OTHERS,20X,F9.1,4X,F9.1)		70441550
3991	WRITE(6,148) S21(22)		70441560
3992	WRITE(6,149) S21(23)		70441570
3993	WRITE(6,151) S21(30),S21(31)		70441580
3994	151 FORMAT (15X,14X)NOSE GEAR DATA,31X,F9.1,4X,F9.1)		70441590
3995	WRITE(6,152) S21(26),S21(29),S21(30)		70441600
3996	152 FORMAT (18X,15X)GROUND LOCATION,13X,F9.1,5X,F9.1,4X,F9.1)		70441610
3997	WRITE(6,153) S21(27)		70441620
3998	153 FORMAT (18X,8X)TRUNNION,20X,F9.1)		70441630
3999	WRITE(6,154) S21(28)		70441640
4000	154 FORMAT (18X,10X)RAD STRUT,18X,F9.1)		70441650
4001	WRITE(6,155) S21(36),S21(37)		70441660
4002	155 FORMAT (15X,14X)MAIN GEAR DATA,31X,F9.1,4X,F9.1)		70441670
4003	WRITE(6,152) S21(32),S21(35),S21(36)		70441680
4004	WRITE(6,153) S21(33)		70441690
4005	WRITE(6,154) S21(34)		70441700
4006	C		70441701
4007	C		70441702
4008	WRITE(6,170)		70441703
4009	170 FORMAT(1M1,32X,40X)*** SECONDARY STRUCTURE - INPUT DATA SET ***.		70441705
4010	1 12X,21M** SPRINT - (P100) **		
4011	1 //20X,37X)INDICATORS AND C.G. DATA, SCST REGION)		70441706
4012	DO 174 N=1,100,5		70441707
4013	K = N + 4		70441708
4014	WRITE(6,170) N,(SCST(J),J=4,K,1)		70441709
4015	170 FORMAT(4X,13,5F10.4)		70441710
4016	174 CONTINUE		70441711
4017	WRITE(6,170)		70441712
4018	170 FORMAT(//20X,37X)GEOMETRIC DEFINITIONS, SCOT REGION)		70441713
4019	DO 176 N=1,80,5		70441714
4020	K = N + 4		70441715



04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	****	CONTENTS	****
3021		WRITE(1,70) K,SCOT(1),J,N,K,1)	70441716
3022		170 CONTINUE	70441717
3023	C		70441718
3024	C		70441719
3025		WRITE(1,80)	70441720
3026		80 FORMAT(1H1,3X,3H*** SHELL GEOMETRY - INPUT DATA SET ***,13X,	70441721
3027		1 21H** SPRINT - (P100) ***)	
3028		WRITE(1,91)	70441770
3029		91 FORMAT(1H5,5X,5HFRAME,4X,5HFRAME,4X,5HLONGERON,4X,4HDECK,7X,	70441780
3030		10HCUTOUT,4X,5HCUTOUT,4X,5HCUTOUT,4X,5HSHROUD,5X,5HCUT,4X,	70441790
3031		5HSTATION,4X,5HSPACING,5X,5HDEPTH,5X,11HDEPTH RATIO,2X,5HDEPTH,	70441800
3032		5X,5HSHAPER,5X,5HCHAM,5X,5HIDE,5X,5HRADIUS)	70441810
3033		WRITE(1,62) (1,NO(1),FRM(1),FRC(1),MTLO(1),DHT(1),CTOU(1),	70441820
3034		1CTOL(1),CTOS(1),RAD(1),1=1,NC)	70441830
3035		62 FORMAT(7X,13,2F11.1,F9.1,2F11.4,4F10.1)	70441840
3036		WRITE(1,63)	70441850
3037		63 FORMAT(1H5,15X,5HNOTES,15X,31HFRAME SPACING = 1000 INDICATES ,	70441860
3038		12HFIXED FRAME SPACING,15X,20HNEGATIVE VALUE FOR LONGERON ,	70441870
3039		22HDEPTH INDICATES ANGULAR,15X,22HLOCATION OF LONGERONS ,	70441880
3040		31HIN RADIANS,15X,37HVALUE OF 1 DESIGNATES THE REMOVAL OF ,	70441890
3041		4HRECTOR,15X,20HNEGATIVE VALUE FOR CUTOUTS AND SHROUD ,	70441900
3042		53HRADIUS DESIGNATES FORWARD EDGE.)	70441910
3043	C		70441920
3044	C		70441930
3045		WRITE(1,110)	70441980
3046		110 FORMAT(1H1,27X,20H*** SHELL CRITERIA AND INDICATORS - ,	70441990
3047		110HINPUT DATA SET ***,7X,21H** SPRINT - (P100) ***/21X,	
3048		20HSHAPER,2X,5HINDICATOR,12X,7HSENSITIVITY,2X,5HACOUSTIC,5X,	70441990
3049		22HSTIFFNESS REQUIREMENTS,5X,5HCUT,2X,5HSTATION,5X,5HSEAMS,5X,	70441990
3050		40HBLAKEHEAD,5X,5HPRESSURE,5X,4HFUEL,4X,5HLEVEL-08,5X,	70442000
3051		5HWEI-VERT,5X,5HWEI-SIDE,5X,5HJ)	70442010
3052		WRITE(1,120) (1,NO(1),SPN(1),BLKD(1),PRES(1),RHS(1),ACOU(1),	70442020
3053		1EIVT(1),EIBD(1),6JND(1),1=1,NC)	70442030
3054		120 FORMAT(10,F9.1,F9.1,F10.1,F12.1,F9.4,F10.1,3F13.1)	70442040
3055	C		70442050
3056	C		70442060
3057		WRITE(1,70)	70442080
3058		70 FORMAT(1H1,30X,37H*** SHELL GEOMETRY - SECTION DATA ***,	7044 090
3059		1 15X,21H** SPRINT - (P100) ****	
3060		1 5X,5HCUT,5X,4HSTA,5X,5HZO,5X,5HBU,5X,5HBL,5X,5HOS,	70442100
3061		5X,5HRCU,5X,5HCL,5X,5HRS,4X,5HSPER,5X,5HDO,5X,5HGD,5X,5HRO)	70442110
3062		J = NC + 1	70442120
3063		WRITE(1,72) (1,NO(1),ZO(1),BU(1),BL(1),OS(1),RCU(1),CL(1),	70442130
3064		1RCS(1),PER(1),DOO(1),MO(1),RO(1),1=1,J)	70442140
3065		72 FORMAT(17,12F8.1)	70442150
3066	C		70442160
3067	C		70442170
3068		WRITE(1,80)	70442190
3069		80 FORMAT(1H1,30X,40H*** SECTION DATA - GEOMETRY AND UNIT INERTIAS ,	70442200
3070		1 3H***, 5X,21H** SPRINT - (P100) ****	
3071		1 5X,5HDO,5X,4HSEAR,5X,4HDELX,5X,4HAREA,7X,	70442210
3072		5HVVOLUME,7X,4H10X,7X,4H10Y,7X,4H10Z)	70442220
3073		J = NC + 1	70442230
3074		WRITE(1,82) (1,SEAR(1),DELX(1),SF(1),VOL(1),UIX(1),UIY(1),UIZ(1),	70442240
3075		11=1,J)	70442250
3076		82 FORMAT(17,2F10.1,2F12.1,3F11.1)	70442260
3077		WRITE(1,84) TOT(1),TOT(2)	
3078		84 FORMAT(10X,5HTOTAL,12X,2F12.1)	
3079	C		70442270
3080	C		70442280
3081		WRITE(1,100)	70442300
3082		100 FORMAT(1H1,30X,37H*** SHELL GEOMETRY - SECTION DATA ***,16X,	7044 310
3083		1 21H** SPRINT - (P100) ****	
3084		1 17X,20HSECTION AREA-TORQUE,5X,	70442320
3085		5HPERIMETER,5X,10HPERIMETER-DECK,5X,13HDEPTH-EFFECT,5X,	70442330
3086		31HDEPTH-EFFECT,5X,5HCUT,1X,5HSTATION,5X,5HTOTAL,5X,5HCT F10,	70442340
3087		4X,5HCT F11,5X,5HFORWARD,5X,5HIFT,4X,5HFORWARD,5X,5HIFT,5X,	70442350
3088		5HFORWARD,4X,5HIFT,5X,5HFORWARD,4X,5HIFT)	70442360
3089		WRITE(1,101) (1,NO(1),ACRS(1),ANFT(1),ANTAI(1),PER(1),PERAI(1),	70442370
3090		1HDEF(1),PRDAI(1),DEPF(1),DEPAI(1),MIDF(1),MIDAI(1),1=1,NC)	70442380
3091		101 FORMAT(17,F9.1,F9.1,2F8.1,2F8.1)	70442390

CARD NO	CONTENTS	70442391
3692	C	70442391
3693	C	70442392
3694	WRITE(6,100) FMP(14),FMP(104)	70442393
3695	100 FORMAT(1M1,30X,32H*** MISCELLANEOUS SHELL DATA ***.10X,	7044 395
3696	1 21H** SPRINT - (P(80) **)	
3697	1 35X,22H YOUNG'S MODULUS - COVER,4X,F12.1/52X,	70442397
3698	2 54LONERONS,F12.1//24X,10HPANEL SIZE,9X,11HCUTOUT DATA,7X,	70442398
3699	3 15H APPARENT CUTOUT,10X,17HBENDING STIFFNESS/5X,	70442399
3700	4 3HCUT,3X,7HSTATION,4X,5HUPPER,5X,5HLOWER,5X,5HUPPER,5X,	70442400
3701	5 5HLOWER,5X,5HUPPER,5X,5HLOWER,7X,5HVERTICAL,10X,4H5IDE)	70442401
3702	WRITE(6,102) (1,XO(1),BU(1),BL(1),CTOU(1),CTOL(1),RTU(1),	70442402
3703	1 RTL(1),E1VA(1),E1SA(1),I=1,NC)	70442403
3704	102 FORMAT(17,F10.2,2E17.7)	70442404
3705	C	70442405
3706	C	70442410
3707	WRITE(6,90)	70442430
3708	90 FORMAT(1M1,35X,37H*** SECTION DATA - SHELL ELEMENTS ***.10X,	70442440
3709	1 21H** SPRINT - (P(80) **)	
3710	WRITE(6,92)	70442480
3711	92 FORMAT(1M0,17X,5HCUT,3X,5HFRAME,5X,15HBASIC THICKNESS,8X,	70442470
3712	117HLAND REQUIREMENTS,5X,5HBASIC,5X,7HTORSION/5X,3HCUT,8HSTATION,	70442480
3713	26H COND.,8H SPACING,8H UPPER,4X,4H5IDE,3X,5HLOWER,3X,5HUPPER,	70442490
3714	3X,4H5IDE,3X,5HLOWER,2X,7HFLUTTER,2X,7HFORWARD,2X,3HAFI)	70442500
3715	WRITE(6,94) (1,XO(1),13(1),5HFR(1),TCU(1),TCS(1),TCL(1),TLU(1),	70442510
3716	1TLS(1),TLL(1),TCF(1),TGF(1),TGJA(1),I=1,NC)	70442520
3717	94 FORMAT(17,F8.1,16,F9.2,8F8.4)	70442530
3718	C	70442540
3719	C	70442550
3720	WRITE(6,90)	70442570
3721	WRITE(6,95)	70442580
3722	95 FORMAT(//10X,14HCRTICAL COND.,2X,13HLONG./STRING,14X,	70442581
3723	1 2HAREA - LONGERON/STRINGER,5X,15HAREA - LONG C/O/5X,	70442582
3724	2 3HCUT,2X,7HSTATION,3X,4HDOWN,4X,2HUP,3X,11HDEPTH/SPACE,1X,	70442583
3725	3 5HUPPER,4X,5HUPPER,5X,4H5IDE,6X,5HLOWER,3X,10HLONG STIFF,2X,	70442584
3726	4 5HUPPER,5X,5HLOWER)	70442585
3727	WRITE(6,96) (1,XO(1),11(1),12(1),8HSTR(1),STNO(1),ALU(1),ALS(1),	70442586
3728	1 ALL(1),AIT(1),ALCU(1),ALCL(1),I=1,NC)	70442587
3729	96 FORMAT(17,F9.1,217,F11.2,F8.1,8F10.3)	70442588
3730	C	70442600
3731	J = NC + 1	
3732	C	70442670
3733	WRITE(6,200)	70442690
3734	200 FORMAT(1M1,30X,31H*** SHELL COMPONENT HEIGHTS ***.10X,	7044 69
3735	1 21H** SPRINT - (P(80) **)	
3736	WRITE(6,202)	70442694
3737	202 FORMAT(//40X,14HCOVER ELEMENTS,13X,5HMINOR,3X,5HJOINTS,3X,	70442696
3738	1 12HLONGITUDINAL/15X,3HSEQ,4X,3HSTA,5X,5HLENGTH,3X,5HUPPER,5X,	70442698
3739	2 4H5IDE,4X,5HLOWER,4X,5HTOTAL,4X,5HFRAMES,2X,7HSPICES,3X,	70442700
3740	3 15HPARTITIONS)	70442702
3741	WRITE(6,204) (1,HBAR(1),DELX(1),MTCU(1),MTC(1),MTCL(1),MTCY(1),	70442704
3742	1 MTHF(1),MTJB(1),MTPT(1),I=1,J)	70442706
3743	204 FORMAT(10X,17,F9.1)	70442708
3744	T(1) = SUPP(5) + SUPP(7) + SUPP(9)	70442710
3745	WRITE(6,206) SUPP(5),SUPP(7),SUPP(9),T(1),SUPP(1),SUPP(3),SUPP(9)	70442712
3746	206 FORMAT(20X,5HTOTAL,10X,7F9.1)	70442714
3747	C	70442716
3748	C	70442718
3749	WRITE(6,200)	70442724
3750	WRITE(6,210)	70442726
3751	210 FORMAT(4X,20HLONGITUDINAL MEMBERS//70X,6HCUTOUT/15X,3HSEQ,4X,	70442728
3752	1 3HSTA,5X,5HLENGTH,3X,5HUPPER,5X,4H5IDE,4X,5HLOWER,4X,	70442730
3753	2 5HUPPER,4X,5HLOWER,4X,4H5ISC,5X,5HTOTAL)	70442732
3754	WRITE(6,212) (1,HBAR(1),DELX(1),MTLU(1),MTLS(1),MTLL(1),	70442734
3755	1 MLCU(1),MLCL(1),MTST(1),MTLY(1),I=1,J)	70442736
3756	212 FORMAT(10X,17,F9.1)	70442738
3757	T(1) = SUPP(4) + SUPP(13) + SUPP(15) + SUPP(17) + SUPP(19)	70442740
3758	WRITE(6,214) SUPP(4),SUPP(13),SUPP(15),SUPP(17),SUPP(19),SUPP(31),	70442742
3759	1 SUPP(11),T(1)	70442744
3760	214 FORMAT(20X,5HTOTAL,10X,7F9.1)	70442746
3761	C	70443000
3762	C	70443010

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CARD NO	****	CONTENTS	****
3763	5062 CONTINUE		
3764	WRITE(6,300)		70443030
3765	300 FORMAT(1H1,4X,10H*** BODY GROUP ***,2X,		70443040
3766	1 10H** SPRINT ****		
3767	1 20X,20HBUCKHEADS AND FRAMES)		70443050
3768	K = FPM(10)		70443060
3769	DO 310 1=1,K		70443070
3770	WRITE(6,302) FPM(1),FPM(1+75)		70443080
3771	302 FORMAT(40X,F0.2,2X,F10.1)		70443090
3772	305 CONTINUE		70443100
3773	DO 310 1=1,NC		70443110
3774	IF(NTBK(1)) 310,310,320		70443120
3775	308 WRITE(6,302) NO(1),NTBK(1)		70443130
3776	310 CONTINUE		70443140
3777	WRITE(6,320) SUPP(1)		70443150
3778	320 FORMAT(20X,10HMINOR FRAMES,40X,F10.1)		70443160
3779	WRITE(6,330) SUPP(3)		70443170
3780	330 FORMAT(20X,20HJOINTS, SPLICES AND FASTENERS,20X,F10.1)		70443180
3781	WRITE(6,340) SUPP(5)		70443190
3782	340 FORMAT(20X,2HCOVERING - UPPER BETWEEN LONGERONS,10X,F10.1)		70443200
3783	WRITE(6,350) SUPP(7)		70443210
3784	350 FORMAT(20X,2H- SIDE BETWEEN LONGERONS,10X,F10.1)		70443220
3785	WRITE(6,360) SUPP(9)		70443230
3786	360 FORMAT(20X,2H- LOWER BETWEEN LONGERONS,10X,F10.1)		70443240
3787	WRITE(6,370) SUPP(11)		70443250
3788	370 FORMAT(20X,4HCOVERING LONGITUDINAL STIFFENERS - UPPER BETH.,		70443260
3789	10X LONG.,F10.1)		70443270
3790	WRITE(6,380) SUPP(13)		70443280
3791	380 FORMAT(20X,10H- SIDE BETH. LONG.,F11.1)		70443290
3792	WRITE(6,390) SUPP(15)		70443300
3793	390 FORMAT(20X,10H- LOWER BETH. LONG.,F10.1)		70443310
3794	WRITE(6,400) SUPP(17)		70443320
3795	400 FORMAT(20X,17HLONGERONS - UPPER,20X,F10.1)		70443330
3796	WRITE(6,410) SUPP(19)		70443340
3797	410 FORMAT(20X,2H- LOWER,20X,F10.1)		70443350
3798	WRITE(6,420) SUPP(21)		70443360
3799	420 FORMAT(20X,11HENGINE DRAG,40X,F10.1)		70443370
3800	WRITE(6,430) SUPP(19)		70443380
3801	430 FORMAT(20X,20HLONGITUDINAL PARTITIONS - (STRUCTURAL),10X,F10.1)		70443390
3802	WRITE(6,440) SUPP(27)		70443400
3803	440 FORMAT(20X,41HFLOORING AND SUPPORTS - (BASIC STRUCTURE),11X,		70443410
3804	IF10.1)		70443420
3805	WRITE(6,450) SUPP(25)		70443430
3806	450 FORMAT(20X,8HFITTINGS,44X,F10.1)		70443440
3807	WRITE(6,460) SUPP(1)		70443450
3808	460 FORMAT(20X,2HTOTAL - BASIC STRUCTURE,20X,F10.1)		70443460
3809	C		70443470
3810	C		70443480
3811	WRITE(6,500)		70443500
3812	500 FORMAT(1H1,4X,10H*** BODY GROUP ***,3X,10H** SPRINT **		
3813	1 40X,10HSECONDARY STRUCTURE//20X,		
3814	20HENCLOSURES (EXCLUDING TURRET ENCLOSURES))		70443530
3815	WRITE(6,501) SCHT(1)		70443540
3816	501 FORMAT(20X,14HCOPY - PILOT,20X,F10.1)		70443560
3817	IF(SCHT(2)) 504,504,502		70443580
3818	502 WRITE(6,503) SCHT(2)		70443570
3819	503 FORMAT(20X,10HCOPY - NAVIGATOR,31X,F10.1)		70443590
3820	504 WRITE(6,505) SCHT(3)		70443600
3821	505 FORMAT(20X,40HWINDOWFIELD (EXCLUDING BULLET PROTECTION),12X,		70443610
3822	IF10.1)		70443610
3823	WRITE(6,506) SCHT(4)		70443620
3824	506 FORMAT(20X,20HWINDOWS AND PORTS INCL. FRAMES,20X,F10.1)		70443630
3825	IF(SCHT(5)) 510,510,507		70443640
3826	507 WRITE(6,509) SCHT(5)		70443650
3827	509 FORMAT(20X,20HWINDOWS AND PORTS - CABIN,27X,F10.1)		70443660
3828	510 WRITE(6,511) SCHT(6)		70443670
3829	511 FORMAT(20X,40HFLOORING AND SUPPORTS (SECONDARY STRUCTURE),5X,		70443680
3830	IF10.1)		70443690
3831	WRITE(6,512) SCHT(7)		70443700
3832	512 FORMAT(20X,20HSTAIRWAYS AND LADDERS (FIXED),23X,F10.1)		70443710
3833	IF(SCHT(8)) 516,516,514		70443720

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CARD NO	****	CONTENTS	****
3034	514 WRITE(6,515) SCMT(0)		70443750
3035	515 FORMAT(//20X,11HNOSE RADOME,41X,F10.1)		70443760
3036	516 IF(SCMT(0)) 520,520,518		70443750
3037	518 WRITE(6,519) SCMT(0)		70443760
3038	519 FORMAT(20X,11HTAIL RADOME,41X,F10.1)		70443770
3039	520 IF(SCMT(10)) 524,524,522		70443780
3040	522 WRITE(6,523) SCMT(10)		70443790
3041	523 FORMAT(20X,12H15C. RADOME,40X,F10.1)		70443800
3042	524 WRITE(6,525) SCMT(11)		70443810
3043	525 FORMAT(//20X,37HSPEED BRAKES - STRUCTURE AND SUPPORTS,15X,F10.1)		70443820
3044	IF(SCMT(12)) 528,528,526		70443830
3045	526 WRITE(6,527) SCMT(12)		70443840
3046	527 FORMAT(//20X,34HOTHER,47X,F10.1)		70443850
3047	528 WRITE(6,530) SUPP(63)		70443860
3048	530 FORMAT(//20X,25HOTAL SECONDARY STRUCTURE,37X,F10.1)		70443870
3049	C		70443880
3050	C		70443890
3051	WRITE(6,600)		70443910
3052	600 FORMAT(11H,46X,18H*** BODY GROUP ***33X,12H** SPRINT **		
3053	1 46X,18HSECONDARY STRUCTURE/30X,		
3054	233HDOORS, PANELS AND MISCELLANEOUS/60X,11HAREA-50.FT./20X,	70443940	
3055	318HDOORS AND FRAMES)	70443950	
3056	WRITE(6,601) SCOT(23),SCMT(13)	70443980	
3057	601 FORMAT(26X,11H- MAIN GEAR,23X,F8.1,4X,F10.1)	70443970	
3058	WRITE(6,603) SCOT(24),SCMT(14)	70443980	
3059	603 FORMAT(26X,11H- NOSE GEAR,23X,F8.1,4X,F10.1)	70443990	
3060	IF(SCMT(15)) 606,606,604	70444000	
3061	604 WRITE(6,605) SCOT(25),SCMT(15)	70444010	
3062	605 FORMAT(//26X,11H- AFT CARGO,23X,F8.1,4X,F10.1)	70444020	
3063	606 IF(SCMT(16)) 610,610,608	70444030	
3064	608 WRITE(6,609) SCOT(26),SCMT(16)	70444040	
3065	609 FORMAT(//26X,12H- SIDE CARGO,22X,F8.1,4X,F10.1)	70444050	
3066	610 IF(SCMT(17)) 614,614,612	70444060	
3067	612 WRITE(6,613) SCOT(27),SCMT(17)	70444070	
3068	613 FORMAT(26X,18H- FWD RAMP,24X,F8.1,4X,F10.1)	70444080	
3069	614 IF(SCMT(18)) 618,618,616	70444090	
3070	616 WRITE(6,617) SCOT(28),SCMT(18)	70444100	
3071	617 FORMAT(26X,9H- TOW,26X,F8.1,4X,F10.1)	70444110	
3072	618 IF(SCMT(19)) 622,622,620	70444120	
3073	620 WRITE(6,621) SCOT(30),SCMT(19)	70444130	
3174	621 FORMAT(26X,18H- AFT RAMP,24X,F8.1,4X,F10.1)	70444140	
3175	622 IF(SCMT(20)) 626,626,624	70444150	
3076	624 WRITE(6,617) SCOT(32),SCMT(20)	70444160	
3077	625 IF(SCMT(21)) 630,630,628	70444170	
3078	628 WRITE(6,629) SCOT(33),SCMT(21)	70444180	
3079	629 FORMAT(26X,18H- PRESSURE,24X,F8.1,4X,F10.1)	70444190	
3080	630 WRITE(6,631) SCOT(37),SCMT(22)	70444200	
3081	631 FORMAT(//26X,8H- BOMB,26X,F8.1,4X,F10.1)	70444210	
3082	WRITE(6,633) SCMT(23)	70444220	
3083	633 FORMAT(//26X,9H- GUN,41X,F10.1)	70444230	
3084	WRITE(6,635) SCMT(24)	70444240	
3085	635 FORMAT(26X,8H- APPO,40X,F10.1)	70444250	
3086	T(1) = SCOT(48)*SCOT(41)	70444260	
3087	WRITE(6,637) T(1),SCMT(25)	70444285	
3088	637 FORMAT(26X,8H- ESCAPE,26X,F8.1,4X,F10.1)	70444270	
3089	IF(SCMT(26)) 640,640,638	70444280	
3090	638 T(1) = SCOT(42)*SCOT(43)	70444290	
3091	WRITE(6,637) T(1),SCMT(26)	70444295	
3092	640 IF(SCMT(27)) 644,644,642	70444300	
3093	642 T(1) = SCOT(44)*SCOT(45)	70444310	
3094	WRITE(6,643) T(1),SCMT(27)	70444315	
3095	643 FORMAT(26X,11H- PARATROOP,23X,F8.1,4X,F10.1)	70444320	
3096	644 T(1) = SCOT(46)*SCOT(47)	70444330	
3097	WRITE(6,645) T(1),SCMT(28)	70444335	
3098	645 FORMAT(//26X,18H- ENTRANCE,24X,F8.1,4X,F10.1)	70444340	
3099	WRITE(6,647) SCMT(38)	70444350	
3100	647 FORMAT(//26X,8H- ACCESS,38X,F10.1)	70444360	
3101	IF(SCMT(31)) 650,650,648	70444370	
3102	648 WRITE(6,649) SCMT(31)	70444380	
3103	649 FORMAT(26X,8H- I.F.R.,38X,F10.1)	70444390	
3104	650 IF(SCMT(32)) 654,654,652	70444400	

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUSELAGE OVERLAY
CARD NO	****	CONTENTS	****
3005	052 WRITE(5,053) SCOT(40),SCMT(32)		7044410
3006	053 FORMAT(26X,04- R.A.T.,26X,F0.1,4X,F10.1)		7044420
3007	054 IF(SCMT(33)) 055,055,060		7044430
3008	056 WRITE(5,061) SCOT(50),SCMT(33)		7044440
3009	061 FORMAT(26X,04- ENGINE,26X,F0.1,4X,F10.1)		7044450
3010	055 IF(SCMT(34)) 056,056,056		7044460
3011	058 WRITE(5,057) SCOT(51),SCMT(34)		7044470
3012	057 FORMAT(26X,11M- ACCESSORY,23X,F0.1,4X,F10.1)		7044480
3013	059 WRITE(5,059)		7044490
3014	059 FORMAT(20X,23PANELS (NON STRUCTURAL))		7044500
3015	IF(SCMT(20)) 064,064,062		7044510
3016	062 WRITE(5,063) SCMT(20)		7044520
3017	063 FORMAT(26X,10M- SPOILER DEFLECTOR,27X,F10.1)		7044530
3018	064 IF(SCMT(35)) 065,065,066		7044540
3019	066 WRITE(5,067) SCMT(35)		7044550
3020	067 FORMAT(26X,13M- HEAT SHIELD,33X,F10.1)		7044560
3021	068 IF(SCMT(36)) 072,072,076		7044570
3022	076 WRITE(5,071) SCOT(53),SCMT(36)		7044580
3023	071 FORMAT(26X,15M- MAIN GEAR POD,19X,F0.1,4X,F10.1)		7044590
3024	072 IF(SCMT(36)) 076,076,074		7044600
3025	074 WRITE(5,075) SCOT(55),SCMT(36)		7044610
3026	075 FORMAT(26X,04- DORSAL,26X,F0.1,4X,F10.1)		7044620
3027	076 WRITE(5,077) SCMT(36)		7044630
3028	077 FORMAT(20X,20MALIGNWAYS, STEPS, GRIPS,30X,F10.1)		7044640
3029	IF(SCMT(40)) 080,080,078		7044650
3030	078 WRITE(5,079) SCMT(40)		7044660
3031	079 FORMAT(20X,20MANTI-SKID PROTECTION,32X,F10.1)		7044670
3032	080 WRITE(5,081) SCMT(37)		7044680
3033	081 FORMAT(20X,19MFAIRING AND FILLETS,33X,F10.1)		7044690
3034	WRITE(5,083) SCMT(41)		7044700
3035	083 FORMAT(20X,15MEXTERIOR FINISH,37X,F10.1)		7044710
3036	WRITE(5,085) SCMT(42)		7044720
3037	085 FORMAT(20X,15MINTERIOR FINISH,37X,F10.1)		7044730
3038	WRITE(5,086) SUPP(05)		7044740
3039	086 FORMAT(20X,40MTOTAL SECONDARY STRUCTURE (DOORS, PANELS, MISC.),		7044750
3040	1 14X,F10.1)		7044760
3041	WRITE(5,460) SUPP(61)		7044770
3042	WRITE(5,530) SUPP(63)		7044780
3043	WRITE(5,682) SUPP(67)		7044790
3044	082 FORMAT(20X,18MTOTAL - BODY GROUP,44X,F10.1)		7044800
3045	C		7044810
3046	WRITE(5,700)		7044820
3047	700 FORMAT(11M,46X,18M*** BODY GROUP *** 33X,12M** SPRINT **/6X,		
3048	1 12MBALANCE DATA//73X,04MHEIGHT,5X,10MHORIZ. ARM)		7044870
3049	WRITE(5,702) SUPP(21),SUPP(22)		7044880
3050	702 FORMAT(26X,20MBULLEHEADS AND FRAMES,20X,F12.2)		7044890
3051	WRITE(5,704) SUPP(3),SUPP(4)		7044900
3052	704 FORMAT(26X,20MJOINTS, SPLICES AND FASTENERS,11X,F12.2)		7044910
3053	WRITE(5,706) SUPP(1),SUPP(2)		7044920
3054	706 FORMAT(26X,12MINNER FRAMES,20X,F12.2)		7044930
3055	WRITE(5,708) SUPP(5),SUPP(6),SUPP(7),SUPP(8),SUPP(9),SUPP(10)		7044940
3056	708 FORMAT(26X,10MCOVERING - UPPER,24X,F12.2/36X,4MSIDE,25X,F12.2/		7044950
3057	1 36X,5MLOWER,24X,F12.2)		7044960
3058	WRITE(5,710) SUPP(41),SUPP(42),SUPP(43),SUPP(44),SUPP(45),		7044970
3059	1 SUPP(46),SUPP(47),SUPP(48),SUPP(49),SUPP(50)		7044980
3060	710 FORMAT(26X,37MLONGERONS AND LONGITUDINAL STIFFENERS,3X,F12.2/		7044990
3061	1 68X,F12.2/68X,F12.2/68X,F12.2/68X,F12.2/68X,F12.2)		7045010
3062	WRITE(5,712) SUPP(23),SUPP(24)		7045020
3063	712 FORMAT(26X,11MENGINE CRAD,25X,F12.2)		7045030
3064	WRITE(5,714) SUPP(19),SUPP(20)		7045040
3065	714 FORMAT(26X,23MLONGITUDINAL PARTITIONS,17X,F12.2)		7045050
3066	WRITE(5,716) SUPP(27),SUPP(28)		7045060
3067	716 FORMAT(26X,21MFLOORING AND SUPPORTS,18X,F12.2)		7045070
3068	WRITE(5,718) SUPP(25),SUPP(26)		8045080
3069	718 FORMAT(26X,04MFITTINGS,32X,F12.2)		7045090
3070	WRITE(5,720) SUPP(51),SUPP(52)		7045100
3071	720 FORMAT(18X,21MTOTAL BASIC STRUCTURE,29X,F12.2)		7045110
3072	WRITE(5,702)		7045120
3073	702 FORMAT(20X,10MSECONDARY STRUCTURE)		7045130
3074	WRITE(5,704) (SCMT(1),SCMT(1-50),1-1,12)		7045140
3075	704 FORMAT(68X,F12.2)		7045150

CARD NO	****	*****	CONTENTS	
3976			WRITE(6,726) SUPH(63),SUPH(6)	70445168
3977			726 FORMAT(/18X,25#TOTAL SECONDARY STRUCTURE,25X,2F12.2)	70445170
3978	C			70445171
3979			WRITE(6,700)	70445174
3980			WRITE(6,730)	70445180
3981			730 FORMAT( 20X,3#DOORS, PANELS AND MISCELLANEOUS)	70445190
3982			WRITE(6,724) SCMT(1),SCST(1+50),I=1,42)	70445200
3983			WRITE(6,734) SUPH(65),SUPH(66)	70445210
3984			734 FORMAT(/18X,4#TOTAL SECONDARY STRUCTURE (DOORS, PANELS, MISC.),	70445220
3985			I 2X,2F12.2)	70445230
3986			WRITE(6,736) SUPH(67),SUPH(68)	70445240
3987			736 FORMAT(/18X,1#TOTAL L - BODY GROUP,32X,2F12.2)	70445240
3988	C			70445250
3989			WRITE(6,900)	70445260
3990			900 FORMAT(1#D,12#END FUSELAGE)	70445270
3991			RETURN	70445998
3992			END	70445999
3993	C			
3994	C		!!	
3995	"		SUBROUTINE SUPPLY	
3996	C		:::	
3997	C			
3998			SUBROUTINE SUPPLY	70430010
3999	C		WRITTEN 6 MARCH 1972	70430020
4000	C		TO SUMMARIZE FUSELAGE HEIGHTS	70430030
4001	C			70430040
4002			COMMON TCOM(400)	70430050
4003	C			70430060
4004			DIMENSION D(2000),T(2000),DC(100),ND(200)	70430070
4005			DIMENSION XO(20)	70430080
4006			DIMENSION SCST(100)	70430090
4007			DIMENSION MLCU(20),MLCL(20)	70430092
4008			DIMENSION FMHT(51)	70430100
4009			DIMENSION S(100)	70430110
4010			DIMENSION HBAR(20)	70430120
4011			DIMENSION WTCU(20),WTC5(20),WTCL(20),WTCT(20)	70430130
4012			DIMENSION WTLU(20),WTL5(20),WTLT(20),WTST(20),WTLT(20)	70430140
4013			DIMENSION WTHF(20),WTJ5(20)	70430150
4014			DIMENSION COCO(20),COLO(20),CONF(20),COJ5(20)	70430160
4015			DIMENSION MTBK(20),MTP(20)	70430170
4016			DIMENSION SCMT(50)	70430180
4017			DIMENSION SUPH(100)	70430190
4018	C			70430200
4019			EQUIVALENCE (D(1),TCOM(1)),(T(1),TCOM(200)) (DC(1),TCOM(410)),	70430210
4020			(ND(1),TCOM(420))	70430220
4021			EQUIVALENCE (D(361),XD(1))	70430230
4022			EQUIVALENCE (D(621),SCST(1))	70430240
4023			EQUIVALENCE (D(1631),MLCU(1)),(D(1651),MLCL(1))	70430242
4024			EQUIVALENCE (D(1810),FMHT(1))	70430250
4025			EQUIVALENCE (T(1),S(1))	70430260
4026			EQUIVALENCE (T(361),HBAR(1))	70430270
4027			EQUIVALENCE (T(1501),WTC(1)),(T(1521),WTC5(1)),	70430280
4028			(T(1541),WTCL(1)),(T(1561),WTCT(1))	70430290
4029			EQUIVALENCE (T(1581),WTLU(1)),(T(1601),WTL5(1)),	70430300
4030			(T(1621),WTLT(1)),(T(1641),WTST(1)),(T(1661),WTLT(1))	70430310
4031			EQUIVALENCE (T(1681),WTHF(1)),(T(1701),WTJ5(1))	70430320
4032			EQUIVALENCE (T(1721),COCO(1)),(T(1741),COLO(1)),	70430330
4033			(T(1761),CONF(1)),(T(1781),COJ5(1))	70430340
4034			EQUIVALENCE (T(1831),MTBK(1)),(T(1851),MTP(1))	70430350
4035			EQUIVALENCE (T(1951),SCMT(1))	70430360
4036			EQUIVALENCE (TCOM(4001),SUPH(1))	70430370
4037			EQUIVALENCE (ND(101),1),(ND(102),J)	70430380
4038			EQUIVALENCE (D(111),MC(1),ND(122),ICST)	70430390
4039	C			70430400
4040			DO 20 I=1,50	70430410
4041			S(I)=D(24)	70430420
4042			20 CONTINUE	70430430
4043			J = MC + 1	70430440
4044			DO 100 I=1,J	70430450
4045			SUPH(I) = SUPH(I) - WTHF(I)	70430460
4046			G(I) = G(I) + WTHF(I)*CONF(I)	70430470

04/10/74	INPUT LISTING	AUTOFLOW CHART SET - SHEEP	SECOND FUELAGE OVERLAY
CARD NO	****	CONTENTS	****
4047	SUPH(3) = SUPH(3) + MTJS(1)		70430510
4048	S(2) = S(2) + MTJS(1)*COJS(1)		70430520
4049	SUPH(5) = SUPH(5) + MTCU(1)		70430530
4050	S(3) = S(3) + MTCU(1)*COCO(1)		70430540
4051	SUPH(7) = SUPH(7) + MTC5(1)		70430550
4052	S(4) = S(4) + MTC5(1)*COCO(1)		70430560
4053	SUPH(9) = SUPH(9) + MTCL(1)		70430570
4054	S(5) = S(5) + MTCL(1)*COCO(1)		70430580
4055	SUPH(11) = SUPH(11) + MTST(1)		70430590
4056	S(6) = S(6) + MTST(1)*H2AR(1)		70430600
4057	SUPH(13) = SUPH(13) + MTLU(1)		70430610
4058	S(7) = S(7) + MTLU(1)*COLO(1)		70430620
4059	SUPH(15) = SUPH(15) + MTL5(1)		70430630
4060	S(8) = S(8) + MTL5(1)*COLO(1)		70430640
4061	SUPH(17) = SUPH(17) + MTL1(1)		70430650
4062	S(9) = S(9) + MTL1(1)*COLO(1)		70430660
4063	SUPH(19) = SUPH(19) + MTP7(1)		70430670
4064	S(10) = S(10) + MTP7(1)*H2AR(1)		70430680
4065	SUPH(20) = SUPH(20) + MLCU(1)		70430682
4066	S(15) = S(15) + MLCU(1)*COLO(1)		70430684
4067	SUPH(31) = SUPH(31) + MLC1(1)		70430686
4068	S(16) = S(16) + MLC1(1)*COLO(1)		70430688
4069	100 CONTINUE		70430690
4070	S(12) = SUPH(23)*SUPH(24)		70430698
4071	S(13) = SUPH(25)*SUPH(26)		70430702
4072	DO 110 I=1,NC		70430704
4073	SUPH(21) = SUPH(21) + MTBK(1)		70430706
4074	S(11) = S(11) + MTBK(1)*XD(1)		70430708
4075	110 CONTINUE		70430710
4076	J = FPM7(9)		70430720
4077	DO 120 I=1,J		70430730
4078	SUPH(21) = SUPH(21) + FPM7(1+75)		70430740
4079	S(11) = S(11) + FPM7(1+75)*FPM7(1)		70430750
4080	120 CONTINUE		70430760
4081	SUPH(2) = S(1)/SUPH(1)		70430770
4082	SUPH(4) = S(2)/SUPH(3)		70430780
4083	SUPH(6) = S(3)/SUPH(5)		70430790
4084	SUPH(8) = S(4)/SUPH(7)		70430800
4085	SUPH(10) = S(5)/SUPH(9)		70430810
4086	IF(SUPH(11)) 124,124,122		70430812
4087	122 SUPH(12) = S(6)/SUPH(11)		70430814
4088	124 CONTINUE		70430816
4089	SUPH(14) = S(7)/SUPH(13)		70430820
4090	IF(SUPH(15)) 132,132,131		70430830
4091	131 SUPH(16) = S(8)/SUPH(15)		70430870
4092	132 CONTINUE		70430880
4093	SUPH(18) = S(9)/SUPH(17)		70430890
4094	SUPH(20) = S(10)/SUPH(19)		70430900
4095	SUPH(22) = S(11)/SUPH(21)		70430910
4096	SUPH(27) = SCHT(43)		70430920
4097	SUPH(28) = SCST(93)		70430930
4098	S(14) = SUPH(27)*SUPH(28)		70430932
4099	IF(SUPH(29)) 135,135,134		70430934
4100	134 SUPH(30) = S(15)/SUPH(29)		70430936
4101	135 CONTINUE		70430938
4102	IF(SUPH(31)) 139,139,138		70430940
4103	138 SUPH(32) = S(16)/SUPH(31)		70430942
4104	139 CONTINUE		70430944
4105	DO 150 I=1,16		70430946
4106	J = I*2 - 1		70430948
4107	SUPH(61) = SUPH(61) + SUPH(J)		70430950
4108	S(31) = S(31) + S(1)		70430952
4109	150 CONTINUE		70430958
4110	SUPH(62) = S(31)/SUPH(61)		70430960
4111	DO 200 I=1,12		70431000
4112	SUPH(63) = SUPH(63) + SCHT(1)		70431010
4113	S(32) = S(32) + SCHT(1)*SCST(1+90)		70431020
4114	200 CONTINUE		70431030
4115	DO 300 I=13,42		70431040
4116	SUPH(66) = SUPH(66) + SCHT(1)		70431050
4117	S(33) = S(33) + SCHT(1)*SCST(1+90)		70431060

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APPENDIX B

FUSELAGE MODULE SAMPLE OUTPUT

Sample fuselage module outputs are shown in  
Figures B-1 through B-32.

\*\*\* DATA FROM LOADS PROGRAM TRANSFERRED TO FUSELAGE PROGRAM IN RECORD 33 \*\*\*

CONDTION	LDY	LDC	TEMP	FAC1	FN70	FMYN	ONOT	QVEL	SSPD	STPK	MACH	ALT	P7N	XCPN	P7R4	XCP4
1	2.	1.	95.3	1.50	2.50	0.00	0.000	0.000	0.00	0.00	.6000	0.	17625.	319.57	73848.	791.95
2	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
3	2.	1.	90.0	1.50	2.50	0.00	0.000	0.000	0.00	0.00	.A700	22500.	14613.	319.57	75673.	828.57
4	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
5	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
6	2.	1.	92.7	1.50	-1.00	0.00	0.000	0.000	0.00	0.00	.5740	0.	-7150.	319.57	-29517.	790.91
7	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
8	2.	2.	90.0	1.50	2.00	0.00	0.000	0.000	0.00	0.00	.3334	0.	-2894.	319.57	59624.	822.90
9	2.	3.	90.0	1.50	1.00	0.00	0.000	0.000	10.00	28.00	.1869	0.	768.	319.57	26299.	814.27
10	2.	4.	92.7	1.50	2.47	0.00	-910	0.000	0.00	0.00	.5740	0.	19151.	319.57	66904.	790.91
11	2.	4.	90.0	1.50	2.90	0.00	-1.257	0.000	0.00	0.00	.A140	20000.	17541.	319.57	75635.	809.73
12	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
13	2.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
14	2.	4.	92.7	1.50	-47	0.00	.910	0.000	0.00	0.00	.5740	0.	-4851.	319.57	-7849.	790.91
15	2.	4.	90.0	1.50	-80	0.00	1.257	0.000	0.00	0.00	.A140	20000.	-5543.	319.57	-15796.	809.73
16	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
17	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
18	2.	5.	92.7	1.50	1.00	.20	0.000	-207	0.00	0.00	.5740	0.	7150.	319.57	29517.	790.91
19	2.	5.	90.0	1.50	1.00	.20	0.000	-225	0.00	0.00	.A140	20000.	5999.	319.57	29919.	809.73
20	2.	6.	95.3	1.50	1.25	0.00	.500	0.000	0.00	0.00	.6000	0.	9549.	319.57	40021.	791.95
21	2.	6.	90.0	1.50	1.25	0.00	.500	0.000	0.00	0.00	.A700	22500.	7913.	319.57	40979.	828.57
22	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
23	0.	0.	0.0	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00
24	2.	8.	90.0	1.50	2.00	0.00	0.000	0.000	0.00	0.00	0.0000	0.	0.	0.00	0.	0.00

Figure B-1. Sample output from FUSLD of input loads data (IP71)).

CONDITION	P7WR	YCPW	YCPN	P7M	XCPM	YCPM	PV	XCPV	ZCPV	WING APEX
1	709740.	975.16	467.05	-10982.	1821.66	137.22	0.	1704.	0.00	648.76
2	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
3	740902.	1003.74	455.27	-40938.	1827.35	135.30	0.	1712.	0.00	648.76
4	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
5	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
6	-283445.	974.34	467.34	-4013.	1821.53	137.25	0.	1704.	0.00	648.76
7	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
8	598165.	967.80	386.32	-19095.	1821.30	137.15	0.	1704.	0.00	648.76
9	240696.	969.07	406.38	-8264.	1821.54	137.00	0.	1704.	0.00	648.76
10	642457.	974.34	467.34	53042.	1821.53	137.25	0.	1704.	0.00	648.76
11	734101.	988.33	462.24	58633.	1823.96	136.52	0.	1707.	0.00	648.76
12	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
13	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
14	-75567.	974.34	467.34	-61067.	1821.53	137.25	0.	1704.	0.00	648.76
15	-153318.	988.33	462.24	-79053.	1823.96	136.52	0.	1707.	0.00	648.76
16	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
17	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
18	283445.	974.34	467.34	-4013.	1821.53	137.25	49063.	1704.	422.03	648.76
19	290391.	988.33	462.24	-10210.	1823.96	136.52	52875.	1707.	419.47	648.76
20	384534.	975.16	467.05	-38979.	1821.66	137.22	0.	1704.	0.00	648.76
21	401221.	1003.74	456.27	-54988.	1827.35	135.30	0.	1712.	0.00	648.76
22	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
23	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00
24	0.	0.00	0.00	0.	0.00	0.00	0.	0.	0.00	0.00

Figure B-1. Sample output from FUSLD of input loads data (IP(71)) (concl).

\*\*\* FUSFLAGE INERTIA AND WEIGHT DISTRIBUTION DATA IN RECORD 34 \*\*\*

	DESIGN WEIGHT WING AFT	DESIGN WEIGHT WING FWD	MANEUVER WEIGHT	LANDING WEIGHT	TAXI WEIGHT
	CONDITIONS 1,2,3,4,6, 10,11,14,15, 18,19,20,21, 22 AND 23	CONDITIONS 5,7,12,13, 16 AND 17	CONDITION 8	CONDITION 9	CONDITION 24
DGW	316100.0	316100.0	318000.0	257500.0	318000.0
XCG	931.7	931.7	931.5	925.2	931.5
YCG	0.0	0.0	0.0	0.0	0.0
ZCG	249.4	249.4	249.6	241.5	249.6
TIXX	0.0	0.0	0.0	0.0	0.0
TIYY	22698979270.4	22698979270.4	22718643671.9	21813300366.4	22718643671.9
TIZZ	58349433314.7	58349433314.7	55127068408.7	45204722855.2	55127068408.7
WWT	186454.3	186454.3	188354.3	127854.3	188354.3
XWCG	929.5	929.5	929.3	915.4	929.3
YWCG	387.2	387.2	386.2	382.2	386.2
ZWCG	267.5	267.5	267.7	259.9	267.7
WIOX	0.0	0.0	0.0	0.0	0.0
WIOY	3406602196.6	3406602196.6	3424365211.3	2561897132.6	3424365211.3
WIOZ	39795144607.5	39795144607.5	40017623620.1	26628390966.4	40017623620.1
HWT	4677.5	4677.5	4677.5	4677.5	4677.5
XHCG	1842.6	1842.6	1842.6	1842.6	1842.6
YHCG	100.7	100.7	100.7	100.7	100.7
ZHCG	558.7	558.7	558.7	558.7	558.7
HIOX	0.0	0.0	0.0	0.0	0.0
HIOY	7340897.9	7340897.9	7340897.9	7340897.9	7340897.9
HIOZ	78479871.9	78479871.9	78479871.9	78479871.9	78479871.9

Figure B-2. Sample output from FUSLD of input inertia data (IP(71)).

VWT	2645.2	2645.2	2645.2	2645.2	2645.2
XVCG	1742.2	1742.2	1742.2	1742.2	1742.2
YVCG	0.0	0.0	0.0	0.0	0.0
ZVCG	376.9	376.9	376.9	376.9	376.9
VIOX	0.0	0.0	0.0	0.0	0.0
VIOY	218A5513.9	218A5513.9	218A5513.9	218A5513.9	218A5513.9
VIOZ	10960898.1	10960898.1	10960898.1	10960898.1	10960898.1
AIWT	0.0	0.0	0.0	0.0	0.0
XACG	0.0	0.0	0.0	0.0	0.0
YACG	0.0	0.0	0.0	0.0	0.0
ZACG	0.0	0.0	0.0	0.0	0.0
AIOX	0.0	0.0	0.0	0.0	0.0
AIOY	0.0	0.0	0.0	0.0	0.0
AIOZ	0.0	0.0	0.0	0.0	0.0
STWT	0.0	0.0	0.0	0.0	0.0
XST	0.0	0.0	0.0	0.0	0.0
YST	0.0	0.0	0.0	0.0	0.0
ZST	0.0	0.0	0.0	0.0	0.0
SIOX	0.0	0.0	0.0	0.0	0.0
SIOY	0.0	0.0	0.0	0.0	0.0
SIOZ	0.0	0.0	0.0	0.0	0.0

Figure B-2. Sample output from FUSLD of input inertia data (IP(71)) (concl).

\*\*\* FUSFLAGE INERTIA AND WEIGHT DISTRIBUTION DATA IN RECORD 34 \*\*\*

DESIGN WEIGHT WING AFT	DESIGN WEIGHT WING FWD	MANEUVER WEIGHT	LANDING WEIGHT	TAXI WEIGHT
CONDITIONS	CONDITIONS	CONDITION 8	CONDITION 9	CONDITION 24
1.2,3,4,6, 10.11,14,15, 18,19,20,21, 22 AND 23	5.7,12,13, 16 AND 17			
WFC( 1)	1349.9	1349.9	1349.9	1349.9
WFC( 2)	2557.7	2557.7	2557.7	2557.7
WFC( 3)	127.5	127.5	127.5	127.5
WFC( 4)	8145.5	8145.5	8145.5	8145.5
WFC( 5)	9726.1	9726.1	9726.1	9726.1
WFC( 6)	9703.7	9703.7	9703.7	9703.7
WFC( 7)	309.3	309.3	309.3	309.3
WFC( 8)	9241.8	9241.8	9241.8	9241.8
WFC( 9)	16192.2	16192.2	16192.2	16192.2
WFC(10)	582.1	582.1	582.1	582.1
WFC(11)	5202.5	5202.5	5202.5	5202.5
WFC(12)	366.2	366.2	366.2	366.2
WFC(13)	13574.5	13574.5	13574.5	13574.5
WFC(14)	15640.1	15640.1	15640.1	15640.1
WFC(15)	232.2	232.2	232.2	232.2
WFC(16)	334.1	334.1	334.1	334.1
WFC(17)	3.5	3.5	3.5	3.5
WFC(18)	267.7	267.7	267.7	267.7
WFC(19)	10.9	10.9	10.9	10.9
WFC(20)	201.6	201.6	201.6	201.6

Figure B-3. Sample output from FUSLD of input inertia and speed-altitude profile data (IP(71)).

WFUS( 1)	183.0	183.0	183.0	183.0	183.0
WFUS( 2)	746.4	746.4	746.4	746.4	746.4
WFUS( 3)	48.6	48.6	48.6	48.6	48.6
WFUS( 4)	1367.6	1367.6	1367.6	1367.6	1367.6
WFUS( 5)	2521.0	2521.0	2521.0	2521.0	2521.0
WFUS( 6)	2647.7	2647.7	2647.7	2647.7	2647.7
WFUS( 7)	86.1	86.1	86.1	86.1	86.1
WFUS( 8)	2503.5	2503.5	2503.5	2503.5	2503.5
WFUS( 9)	2764.9	2764.9	2764.9	2764.9	2764.9
WFUS(10)	105.5	105.5	105.5	105.5	105.5
WFUS(11)	964.8	964.8	964.8	964.8	964.8
WFUS(12)	108.9	108.9	108.9	108.9	108.9
WFUS(13)	4090.9	4090.9	4090.9	4090.9	4090.9
WFUS(14)	3567.4	3567.4	3567.4	3567.4	3567.4
WFUS(15)	2206.1	2206.1	2206.1	2206.1	2206.1
WFUS(16)	3587.6	3587.6	3587.6	3587.6	3587.6
WFUS(17)	40.8	40.8	40.8	40.8	40.8
WFUS(18)	670.9	670.9	670.9	670.9	670.9
WFUS(19)	23.6	23.6	23.6	23.6	23.6
WFUS(20)	318.7	318.7	318.7	318.7	318.7

ALTITUDE	MACH NO.	Q
0.0	.6000	533.3
5000.0	.6499	520.5
10000.0	.7060	507.8
15000.0	.7638	494.1
20000.0	.8400	480.3
21250.0	.8548	471.9
22500.0	.8700	463.5
36250.0	.8700	248.5
50000.0	.8700	128.3
0.0	0.0000	64.4

Figure B-3. Sample output from FUSLD of input inertia and speed-altitude profile data (IP(71)) (concl).

\*\*\*COVER MATERIAL DATA. MATL NO. 4-\*\*\*-

7075-T6 AL CLAN SHEET 0.040 TO 0.062 IN. MTL-WORK-5 R DATA EST.  
REF. TABLE 3.2.7.0(C) PAGE 336 A-00-72

```
TFMP.= 90.00  DENSITY= .1010  MU= .3305
```

	A	B	E	E' (RT)	G (RT)
COMPRESSION	.21026216E-10	.2A262543F-03	10500010.5	10700000.0	4022560.0
TENSION	.21026216E-10	.2A262543F-03	10500010.5		
	EPS (P)	EPS (Y)	F (2)	F (3)	F (4)
COMPRESSION	.003A10	.00A190	51200.0	59000.0	62900.0
TENSION	.003A10	.00A190	51200.0	59000.0	62900.0
					F (Y)
					65000.0
					65000.0

FT11= 73000.0 FS11= 44000.0 FARI1= 139000.0

[illegible]

Tm	.0500	.0400	.0400	.0600	.1000	.0300	.0640	.0800	.1560
10	.0590	.0400	.0400	.0600	.1000	.0300	.0640	.0800	.1560
20	.0800	.1560	.1560	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

\*\*\* MATL TEMPERATURE ERROR \*\*\*

MATL NO. 5.0 THERE IS ONE TEMPERATURE ON FILE  
 RECD. TEMP. = 95.3 ASSUMED TEMP. = 80.0

**Figure B-4. Sample output from MATLPI of cover material data (IP(72)).**



CASE 1  
- - - - LONGERON MATERIAL DATA. MATL NO. 5- - - -  
7075-T6 AL RARE PLATE 0.25 TO 0.50 IN. MIL-HDBK-5 A DATA FST.  
REF. TABLE 3.2.7.0 (M) PAGE 334 4-06-72

TEMP.= 90.00 DENSITY= .1010 MUZ .3300

	A	B	E	F (PT)	G (RT)
COMPRESSION	.13136662E-08	.20050470E-03	1050000.0	1050000.0	3900000.0
TENSION	.13136662E-08	.20050470E-03	1050000.0		

	EPS (P)	EPS (Y)	F (P)	F (2)	F (3)	F (4)	F (Y)
COMPRESSION	.005000	.008762	52500.0	59700.0	65000.0	68750.0	71000.0
TENSION	.005000	.008762	52500.0	59700.0	65000.0	68750.0	71000.0

FTII= 79000.0 FSI= 47000.0 FARU= 142000.0

T <sup>M</sup>					
1	.A0000000F+02	,33000000E+00	.13136662E-08	.20050470F-03	.10500000F+08
6	.71000000E+05	.13136662E-08	.20050470E-03	.10500000E+09	.71000000F+05
11	.10100000F+00	.79000000E+05	.52500000E+05	.10500000F+09	.39000000F+07
16	.47000000E+05	.14200000E+06	.22500000E+00	.76000000F+00	.50000000F+00
21	0.	0.	0.	0.	0.
26	0.	0.	0.	0.	0.

Time	0.400	0.600	1.000	0.300	0.640	0.900	1.560
10	0.0500	0.0400	0.0600	0.1000	0.0640	0.0900	0.1560
20	0.0800	0.1560	0.0000	0.0000	0.0000	0.0000	0.0000

**Figure B-5. Sample output from MATLP1 of longeron material data (IP(72)).**

CASE 1

\*\*\*MATERIAL PROPERTY DATA. MATI NO. 5\*\*\*

PAGE 3

7075-T6 AL RARE PLATE 0.25 TO 0.50 IN. MIL-MORAK-5 R DATA FST.  
REF. TABLE 3.2.7.0(R) PAGE 334 4-AK-72

TEMP.= 80.00 DENSITY= .1010 WUE= .3300

	A	R	E	F(1)	G(1)
COMPRESSION	.13136662E-08	.20050470E-03	10500000.0	10500000.0	3900000.0
TENSION	.13136662E-08	.20050470E-03	10500000.0		
	EPS(D)	EPS(Y)	F(D)	F(2)	F(3)
COMPRESSION	.005000	.004760	52500.0	59700.0	65000.0
TENSION	.005000	.004760	52500.0	59700.0	65000.0
				F(4)	F(5)
				68750.0	71000.0
				68750.0	71000.0

FTUE= 75000.0 FSUE= 47000.0 FRUE= 142000.0

TM  
1  
6  
11  
16  
21  
26

	.00000000E+02	.33000000E+00	.13136662E-08	.20050470E-03	.10500000E+08
	.71000000E+05	.13136662E-08	.20050470E-03	.10500000E+08	.71000000E+05
	.10100000E+00	.79000000E+05	.52500000E+05	.10500000E+08	.39000000E+07
	.47000000E+05	.14200000E+08	.22500000E+00	.75000000E+00	.50000000E+00
	0.	0.	0.	0.	0.
	0.	0.	0.	0.	0.

TMO  
10  
20

	.0500	.0400	.0600	.1000	.0300	.0640	.0800	.1560
	.0800	.1560	.0000	.0000	.0000	.0000	.0000	.0000

\*\*\* MATERIAL TEMPERATURE PROPERTIES \*\*\*

MATI NO. 4.0 THERE IS ONE TEMPERATURE ON FILE  
REF. TEMP.= 95.0 ASSUMED TEMP.= 80.0

Figure B-6. Sample output from MATPL1 of major frame material data (IP(72)).

-----MIL-STD FORM MATERIAL DATA. MATI NO. 4-44-

3075-14 AL CLAD SHEET 0.040 TO 0.062 IN. MIL-HRAK-5 R DATA EST.  
DEF. TABLE 3.2.7.0(C) PAGE 336 A-00-72

TFWR = 90.00 DENSITY = .1010 MW = .3305

	A	B	E	F (PT)	G (RT)
COMPRESSION	.21026216F-10	.28262543F-03	10500010.5	10700000.0	4022560.0
TENSION	.21026216F-10	.28262543F-03	10500010.5		

	F (P)	EPS (Y)	F (P)	F (2)	F (3)	F (4)	F (Y)
COMPRESSION	.003210	.004190	40000.0	51200.0	59000.0	62900.0	65000.0
TENSION	.003310	.004190	40000.0	51200.0	59000.0	62900.0	65000.0

FTYJ= 73000.0 FSU= 44000.0 FARI= 139000.0

1	.90000000F+02	.33050000E+00	.21026216E-10	.28262543E-03	.10500011E+08
6	.65000000E+05	.21026216E-11	.28262543E-03	.10500011E+08	.65000000F+05
11	.10100000F+00	.73000000E+05	.40000000E+05	.10700000E+08	.40225600E+07
16	.44000000F+05	.13900000E+06	.29447180E+00	.76000000E+00	.28740965E+00
21	0.	0.	0.	0.	0.
26	0.	0.	0.	0.	0.

TUN
10 .9590 .0400 .0600 .1000 .0640 .0800 .1560
20 .0490 .1560 0.0000 0.0000 0.0000 0.0000 0.0000

Figure B-7. Sample output from SPRINT of shell geometry data (IP(72)).

TMS	REGION	LCN = 14							
1		.80000000E+02	.33050000E+00	.21026216E-10	.28262543E-03	.28262543E-03	.10500011E+08	.10500011E+08	
6		.65000000E+05	.21026216E-10	.28262543E-03	.28262543E-03	.10500011E+08	.65000000E+05	.65000000E+05	
11		.10100000E+00	.73000000E+05	.40000000E+05	.40000000E+05	.10700000E+08	.40225600E+07	.40225600E+07	
16		.44000000E+05	.13900000E+06	.29447180E+00	.29447180E+00	.76000000E+00	.28740965E+00	.28740965E+00	
21		0.	0.	0.	0.	0.	0.	0.	
26		0.	0.	0.	0.	0.	0.	0.	
31		.80000000E+02	.33000000E+00	.13136662E-08	.20050470E-03	.20050470E-03	.10500000E+08	.10500000E+08	
36		.71000000E+05	.13136662E-08	.20050470E-03	.20050470E-03	.10500000E+08	.71000000E+05	.71000000E+05	
41		.10100000E+00	.79000000E+05	.52500000E+05	.52500000E+05	.10500000E+08	.39000000E+07	.39000000E+07	
46		.47000000E+05	.14200000E+06	.22500000E+00	.22500000E+00	.76000000E+00	.50000000E+00	.50000000E+00	
51		0.	0.	0.	0.	0.	0.	0.	
56		0.	0.	0.	0.	0.	0.	0.	
61		.80000000E+02	.33000000E+00	.13136662E-08	.20050470E-03	.20050470E-03	.10500000E+08	.10500000E+08	
66		.71000000E+05	.13136662E-08	.20050470E-03	.20050470E-03	.10500000E+08	.71000000E+05	.71000000E+05	
71		.10100000E+00	.79000000E+05	.52500000E+05	.52500000E+05	.10500000E+08	.39000000E+07	.39000000E+07	
76		.47000000E+05	.14200000E+06	.22500000E+00	.22500000E+00	.76000000E+00	.50000000E+00	.50000000E+00	
81		0.	0.	0.	0.	0.	0.	0.	
86		0.	0.	0.	0.	0.	0.	0.	
91		.80000000E+02	.33050000E+00	.21026216E-10	.28262543E-03	.28262543E-03	.10500011E+08	.10500011E+08	
96		.65000000E+05	.21026216E-10	.28262543E-03	.28262543E-03	.10500011E+08	.65000000E+05	.65000000E+05	
101		.10100000E+00	.73000000E+05	.40000000E+05	.40000000E+05	.10700000E+08	.40225600E+07	.40225600E+07	
106		.44000000E+05	.13900000E+06	.29447180E+00	.29447180E+00	.76000000E+00	.28740965E+00	.28740965E+00	
111		0.	0.	0.	0.	0.	0.	0.	
116		0.	0.	0.	0.	0.	0.	0.	

Figure B-8. Sample output from MFCNTL of component material data (IP(73)).

## \*\*\* LOADS ARRAY \*\*\*

CASE NO 14    LOAD TYPE A    DATA TYPE 2  
 NGW = 318000.0    C.G. = 931.5    N7 = 2.0    QONT = 0.000    MN = 0.00    ALT. = 0.0    TEMP = R0.0

STATION	SFGMENT	THETA	V7-RH	V7-LH	VY-RH	VY-LH	MX-RH	MX-LH	MY-COUPLF
351.0	3.0	2.761	45101.8	45101.8	0.0	0.0	0.0	0.0	-338263.7
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
998.0	12.0	2.279	476743.6	476743.6	0.0	0.0	17472043.0	-17472043.0	0.0
1058.0	13.0	2.279	-44845.4	-44845.4	0.0	0.0	0.0	0.0	0.0
734.0	7.0	.744	-36202.9	-36202.9	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
958.0	10.0	.744	-246328.6	-246328.6	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1641.0	17.0	.701	9892.0	9892.0	0.0	0.0	0.0	0.0	0.0
1728.0	19.0	.810	-20876.0	-20876.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CUT/SEG	STATION	WT FUS	WT CONT.	VZ-CONT.	AIRLOAD	SHEAR-VZ	MOMENT-MY
1	272.0	183.0	1349.0	-4049.8	0.0	-4592.6	-63767.8
2	349.0	746.4	2557.7	-7673.0	0.0	-14510.9	-799483.7
3	353.0	48.6	127.5	-382.4	0.0	75164.6	-1016439.9
4	452.0	1367.6	8145.5	-24436.5	0.0	46625.3	5012159.4
5	600.0	2521.0	9726.1	-29178.4	0.0	9883.9	9193841.2
6	732.0	2647.7	9703.7	-29111.1	0.0	-27170.3	8052942.5
7	736.0	86.1	309.3	-927.8	0.0	-100762.2	7797077.6
8	846.0	2503.5	9241.8	-27725.4	0.0	-135998.1	-5224737.3
9	956.0	2764.9	16192.2	-48576.7	0.0	-192869.7	-27312466.5
10	960.0	105.5	582.1	-1746.2	0.0	-687589.5	-25073384.9
11	996.0	964.8	5202.5	-15607.4	0.0	-706091.3	-50159638.5
12	1000.0	108.9	366.2	-1098.6	0.0	245970.6	-51079880.0
13	1142.0	4090.9	13574.5	-40723.4	0.0	103283.7	-27448808.9
14	1292.0	3567.4	15640.1	-46920.4	0.0	45661.2	-16277943.3
15	1398.0	2206.1	232.2	-696.5	0.0	38346.5	-11825539.3
16	1639.0	3587.6	334.1	-1002.3	0.0	26581.2	-4001752.2
17	1643.0	40.8	3.5	-10.5	0.0	46232.4	-3856125.0
18	1726.0	670.9	267.7	-803.0	0.0	43416.6	-135691.1
19	1730.0	23.6	10.9	-32.7	0.0	1561.0	-45735.9
20	1817.9	318.7	201.6	0.0	0.0	0.0	0.0

Figure B-9. Sample output from FUSLD of ultimate shell loads data (IP(74)).

# LOAD CONDITION NO. 14

DGW.	POUNDS	INPUT	CORRECTED
XCG.	INCHES	318000.00	318000.00
ZCG.	INCHES	931.54	931.54
TIYY.	LR-IN**4	249.58	249.58
ODOT.	RAD/SEC SQ	22718643671.91	22718643671.91
PZWR.	POUNDS	0.00	0.00
XCPW.	INCHES	0.00	0.00
		0.00	0.00

Figure B-10. Sample output from DUMY1 of vehicle balance corrections (IP(74)).

```

FUSELAGE STATION = 1724.00

GEOMETRY TYPE IS ROUNDED RECTANGLE

HOR17 FLAT = .07  RADIUS = 24.41  VERT FLAT = .07

LOAD SETS = 14  LOAD PNTS = 2

LOAD SET 1  TEMPERATURE = 95.3
LOAD PT.    THETA  VERTICAL FORCE  HOR17. FORCE  MOMENT
1           46.42  -.43198554E+05  0.          0.
2           313.58  -.43198554E+05  0.          0.

LOAD SET 2  TEMPERATURE = 80.0
LOAD PT.    THETA  VERTICAL FORCE  HOR17. FORCE  MOMENT
1           46.42  -.91861066E+05  0.          0.
2           313.58  -.91861066E+05  0.          0.

LOAD SET 3  TEMPERATURE = 92.7
LOAD PT.    THETA  VERTICAL FORCE  HOR17. FORCE  MOMENT
1           46.42  .16683016E+05  0.          0.
2           313.58  .16683016E+05  0.          0.

LOAD SET 4  TEMPERATURE = 80.0
LOAD PT.    THETA  VERTICAL FORCE  HOR17. FORCE  MOMENT
1           46.42  -.50556935E+05  0.          0.
2           313.58  -.50556935E+05  0.          0.

```

Figure B-11. Sample output from FRMND1 and FRFME of frame shape parameters and external loads data (IP(75)).

LOAD SET 5	TEMPERATURE = 80.0				
LOAD PT.	THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT	
1	46.42	-.37621726E+05	0.	0.	
2	313.52	-.37621726E+05	0.	0.	
LOAD SET 6	TEMPERATURE = 92.7				
LOAD PT.	THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT	
1	46.42	.24323490E+05	0.	0.	
2	313.52	.24323490E+05	0.	0.	
LOAD SET 7	TEMPERATURE = 80.0				
LOAD PT.	THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT	
1	46.42	.18441204E+05	0.	0.	
2	313.52	.18441204E+05	0.	0.	
LOAD SET 8	TEMPERATURE = 92.7				
LOAD PT.	THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT	
1	46.42	-.57689522E+05	0.	0.	
2	313.52	-.57689522E+05	0.	0.	
LOAD SET 9	TEMPERATURE = 80.0				
LOAD PT.	THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT	
1	46.42	-.71523926E+05	0.	0.	
2	313.52	-.71523926E+05	0.	0.	

Figure B-11. Sample output from FRMND1 and FFRME of frame shape parameters and external loads data (IP(75)) (cont).



LOAD SFT 10						TEMPERATURE = 92.7		
LOAD PT.		THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT			
1		46.42	-.16683016E+05	-.27208668E+05	-.27675314E+07			
2		313.58	-.16683016E+05	-.27208668E+05	-.27675314E+07			
LOAD SFT 11						TEMPERATURE = 80.0		
LOAD PT.		THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT			
1		46.42	-.26541361E+05	-.30285791E+05	-.29030895E+07			
2		313.58	-.26541361E+05	-.30285791E+05	-.29030895E+07			
LOAD SFT 12						TEMPERATURE = 95.3		
LOAD PT.		THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT			
1		46.42	-.55937786E+05	0.	0.			
2		313.58	-.55937786E+05	0.	0.			
LOAD SFT 13						TEMPERATURE = 80.0		
LOAD PT.		THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT			
1		46.42	-.83568975E+05	0.	0.			
2		313.58	-.83568975E+05	0.	0.			
LOAD SFT 14						TEMPERATURE = 80.0		
LOAD PT.		THETA	VERTICAL FORCE	HOR17. FORCE	MOMENT			
1		46.42	-.20876049E+05	0.	0.			
2		313.58	-.20876049E+05	0.	0.			

Figure B-11. Sample output from FRMD1 and FRFME of frame shape parameters and external loads data (IP(75)) (concl).

LOAD SFT = 1						
CUT	VRAR	ZRAR	DELS	MOMENT	AXIAL	SHEAR
1	3.817	24.079	6.792	-.1242291E+05	-.1411616E+05	.2303989E+04
2	11.077	21.734	6.784	.9113448E+04	-.1106601E+05	.6348015E+04
3	17.252	17.252	6.784	.5207119E+05	.6722544E+04	-.6722543E+04
4	21.734	11.077	6.784	.2871536E+05	.2800045E+05	-.1155286E+05
5	24.079	3.817	6.792	-.4251417E+05	.2525297E+05	-.2358767E+04
6	24.079	-3.817	6.792	-.6119250E+05	.1742869E+05	.4303915E+04
7	21.734	-11.077	6.784	-.4344738E+05	.1051168E+05	.8015752E+04
8	17.252	-17.252	6.784	-.7709821E+04	.8550452E+04	.8550452E+04
9	11.077	-21.734	6.784	.2796591E+05	.1106601E+05	.6348015E+04
10	3.817	-24.079	6.792	.4950227E+05	.1411616E+05	.2303989E+04
11	-3.817	-24.079	6.792	.4950227E+05	.1411616E+05	-.2303989E+04
12	-11.077	-21.734	6.784	.2796591E+05	.1106601E+05	-.6348015E+04
13	-17.252	-17.252	6.784	-.7709821E+04	.8550452E+04	-.8550452E+04
14	-21.734	-11.077	6.784	-.4344738E+05	.1051168E+05	-.8015752E+04
15	-24.079	-3.817	6.792	-.6119250E+05	.1742869E+05	-.4303915E+04
16	-24.079	3.817	6.792	-.4251417E+05	.2525297E+05	.2358767E+04
17	-21.734	11.077	6.784	.2871536E+05	.2800045E+05	.1155286E+05
18	-17.252	17.252	6.784	.5207119E+05	.6722544E+04	.6722543E+04
19	-11.077	21.734	6.784	.2871536E+05	.2800045E+05	-.1155286E+05
20	-3.817	24.079	6.792	-.4251417E+05	.2525297E+05	-.2358767E+04

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)).

LOAD SET = 2

CUT	YBAP	ZRAR	NELS	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	-.2641714E+05	-.3001780E+05	.4899397E+04
2	11.077	21.734	6.784	.1937961E+05	-.2353170E+05	.1349896E+05
3	17.252	17.252	6.784	.1107286E+06	.1429539E+05	-.1429539E+05
4	21.734	11.077	6.784	.6106278E+05	.5954253E+05	-.2456698E+05
5	24.079	3.817	6.792	-.9040574E+05	.5370005E+05	-.5015883E+04
6	24.079	-3.817	6.792	-.1301249E+06	.3706184E+05	.9152209E+04
7	21.734	-11.077	6.784	-.9239020E+05	.2235293E+05	.1704537E+05
8	17.252	-17.252	6.784	-.1639482E+05	.1818240E+05	.1818240E+05
9	11.077	-21.734	6.784	.5946908E+05	.2353170E+05	.1349896E+05
10	3.817	-24.079	6.792	.1052658E+06	.3001780E+05	.4899397E+04
11	-3.817	-24.079	6.792	.1052658E+06	.3001780E+05	-.4899397E+04
12	-11.077	-21.734	6.784	.5946908E+05	.2353170E+05	-.1349896E+05
13	-17.252	-17.252	6.784	-.1639482E+05	.1818240E+05	-.1818240E+05
14	-21.734	-11.077	6.784	-.9239020E+05	.2235293E+05	-.1704537E+05
15	-24.079	-3.817	6.792	-.1301249E+06	.3706184E+05	-.9152209E+04
16	-24.079	3.817	6.792	-.9040574E+05	.5370005E+05	.5015883E+04
17	-21.734	11.077	6.784	.6106278E+05	.5954253E+05	.2456698E+05
18	-17.252	17.252	6.784	.1107286E+06	.1429539E+05	.1429539E+05
19	-11.077	21.734	6.784	.1937961E+05	-.2353170E+05	-.1349896E+05
20	-3.817	24.079	6.792	-.2641714E+05	-.3001780E+05	-.4899397E+04

Figure B-12. Sample output from FRM.D of frame coordinates and internal loads (IP(76)) (cont).

LOAD SFT = 3						
CHIT	YRAP	ZRAP	DELS	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	.4797653F+04	.5451574E+04	-.8897864E+03
2	11.077	21.734	6.784	-.3519558F+04	.4273626F+04	-.2451564E+04
3	17.252	17.252	6.784	-.2010958F+05	-.2596205E+04	.2596205E+04
4	21.734	11.077	6.784	-.1108970F+05	-.1081360E+05	.4461644E+04
5	24.079	3.817	6.792	.1641871F+05	-.9752541F+04	.9109415E+03
6	24.079	-3.817	6.792	.2363217F+05	-.6730852E+04	-.1662145E+04
7	21.734	-11.077	6.784	.1677911F+05	-.4059547E+04	-.3095634E+04
8	17.252	-17.252	6.784	.2977486F+04	-.3302132F+04	-.3302132E+04
9	11.077	-21.734	6.784	-.1080026E+05	-.4273626F+04	-.2451564F+04
10	3.817	-24.079	6.792	-.1911747E+05	-.5451574E+04	-.8897864E+03
11	-3.817	-24.079	6.792	-.1911747E+05	-.5451574F+04	.8897864E+03
12	-11.077	-21.734	6.784	-.1080026E+05	-.4273626F+04	.2451564F+04
13	-17.252	-17.252	6.784	.2977486F+04	-.3302132F+04	.3302132F+04
14	-21.734	-11.077	6.784	.1677911F+05	-.4059547F+04	.3095634E+04
15	-24.079	-3.817	6.792	.2363217E+05	-.6730852F+04	.1662145E+04
16	-24.079	3.817	6.792	.1641871E+05	-.9752541E+04	-.9109415E+03
17	-21.734	11.077	6.784	-.1108970F+05	-.1081360E+05	-.4461644E+04
18	-17.252	17.252	6.784	-.2010958F+05	-.2596205E+04	-.2596205E+04
19	-11.077	21.734	6.784	-.3519558F+04	.4273626E+04	.2451564E+04
20	-3.817	24.079	6.792	.4797653F+04	.5451574E+04	.8897864E+03

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76) (cont)).

LOAD SET = 4

CUT	YRPR	ZRPR	DELS	MOMENT	AXIAL	SHFAP
1	3.817	24.079	6.792	-.1453901E+05	-.1652069E+05	.2696447E+04
2	11.077	21.734	6.784	.1066582E+05	-.1295099E+05	.7429326E+04
3	17.252	17.252	6.784	.6094093E+05	.7867653E+04	-.7867652E+04
4	21.734	11.077	6.784	.3360670E+05	.3277001E+05	-.1352076E+05
5	24.079	3.817	6.792	-.4975598E+05	.2955452E+05	-.2760557E+04
6	24.079	-3.817	6.792	-.7161594E+05	.2039747E+05	.5037038E+04
7	21.734	-11.077	6.784	-.5084815E+05	.1230223E+05	.9381143E+04
8	17.252	-17.252	6.784	-.9023101E+04	.1000692E+05	.1000692E+05
9	11.077	-21.734	6.784	.3272959E+05	.1295099E+05	.7429326E+04
10	3.817	-24.079	6.792	.5793442E+05	.1652069E+05	.2696447E+04
11	-3.817	-24.079	6.792	.5793442E+05	.1652069E+05	-.2696447E+04
12	-11.077	-21.734	6.784	.3272959E+05	.1295099E+05	-.7429326E+04
13	-17.252	-17.252	6.784	-.9023101E+04	.1000692E+05	-.1000692E+05
14	-21.734	-11.077	6.784	-.5084815E+05	.1230223E+05	-.9381143E+04
15	-24.079	-3.817	6.792	-.7161594E+05	.2039747E+05	-.5037038E+04
16	-24.079	3.817	6.792	-.4975598E+05	.2955452E+05	.2760557E+04
17	-21.734	11.077	6.784	.3360670E+05	.3277001E+05	.1352076E+05
18	-17.252	17.252	6.784	.6094093E+05	.7867653E+04	.7867652E+04
19	-11.077	21.734	6.784	.1066582E+05	-.1295099E+05	-.7429326E+04
20	-3.817	24.079	6.792	-.1453901E+05	-.1652069E+05	-.2696447E+04

Figure B-12. | Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

LOAD SET = 5

CHIT	YRAP	ZRAP	NELS	MOMENT	AXIAL	SHFAP
1	3.817	24.079	6.792	-.1081915E+05	-.1229380E+05	.2006550E+04
2	11.077	21.734	6.784	.7936924E+04	-.9637417E+04	.5528501E+04
3	17.252	17.252	6.784	.4534893E+05	.5854680E+04	-.5854680E+04
4	21.734	11.077	6.784	.2500828E+05	.2438566E+05	-.1006142E+05
5	24.079	3.817	6.792	-.3702570E+05	.2199287E+05	-.2054256E+04
6	24.079	-3.817	6.792	-.5329270E+05	.1517869E+05	.3748290E+04
7	21.734	-11.077	6.784	-.3783843E+05	.9154650E+04	.6980938E+04
8	17.252	-17.252	6.784	-.6714502E+04	.7446609E+04	.7446609E+04
9	11.077	-21.734	6.784	.2435558E+05	.9637417E+04	.5528501E+04
10	3.817	-24.079	6.792	.4311165E+05	.1229380E+05	.2006550E+04
11	-3.817	-24.079	6.792	.4311165E+05	.1229380E+05	-.2006550E+04
12	-11.077	-21.734	6.784	.2435558E+05	.9637417E+04	-.5528501E+04
13	-17.252	-17.252	6.784	-.6714502E+04	.7446609E+04	-.7446609E+04
14	-21.734	-11.077	6.784	-.3783843E+05	.9154650E+04	-.6980938E+04
15	-24.079	-3.817	6.792	-.5329270E+05	.1517869E+05	-.3748290E+04
16	-24.079	3.817	6.792	-.3702570E+05	.2199287E+05	.2054256E+04
17	-21.734	11.077	6.784	.2500828E+05	.2438566E+05	.1006142E+05
18	-17.252	17.252	6.784	.4534893E+05	.5854680E+04	.5854680E+04
19	-11.077	21.734	6.784	.7936924E+04	-.9637417E+04	-.5528501E+04
20	-3.817	24.079	6.792	-.1081915E+05	-.1229380E+05	-.2006550E+04

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76) (cont)).

LOAD SET = 6

CUT	YBAR	ZBAR	NELS	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	.6994878E+04	.7948281E+04	-.1297290E+04
2	11.077	21.734	6.784	-.5131442E+04	.6230357E+04	-.3574329E+04
3	17.252	17.252	6.784	-.2931934E+05	-.3785213E+04	.3785213E+04
4	21.734	11.077	6.784	-.1614855E+05	-.1576601E+05	.6504994E+04
5	24.079	3.817	6.792	.2393814E+05	-.1421900E+05	.1328134E+04
6	24.079	-3.817	6.792	.3445521E+05	-.9813442E+04	-.2423373E+04
7	21.734	-11.077	6.784	.2446360E+05	-.5918735E+04	-.4513370E+04
8	17.252	-17.252	6.784	.4341112E+04	-.4814439E+04	-.4814439E+04
9	11.077	-21.734	6.784	-.1574656E+05	-.6230857E+04	-.3574329E+04
10	3.817	-24.079	6.792	-.2787288E+05	-.7948281E+04	-.1297290E+04
11	-3.817	-24.079	6.792	-.2787288E+05	-.7948281E+04	.1297290E+04
12	-11.077	-21.734	6.784	-.1574656E+05	-.6230857E+04	.3574329E+04
13	-17.252	-17.252	6.784	.4341112E+04	-.4814439E+04	.4814439E+04
14	-21.734	-11.077	6.784	.2446360E+05	-.5918735E+04	.4513370E+04
15	-24.079	-3.817	6.792	.3445521E+05	-.9813442E+04	.2423373E+04
16	-24.079	3.817	6.792	.2393814E+05	-.1421900E+05	-.1328134E+04
17	-21.734	11.077	6.784	-.1616855E+05	-.1576601E+05	-.6504984E+04
18	-17.252	17.252	6.784	-.2931934E+05	-.3785213E+04	-.3785213E+04
19	-11.077	21.734	6.784	-.5131442E+04	.6230857E+04	.3574329E+04
20	-3.817	24.079	6.792	.6994878E+04	.7948281E+04	.1297290E+04

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

LOAD SET = 7		YRAB	ZRAB	DELS	MOMENT	AXIAL	SHFAR
CUT							
1	3.817	24.079	6.792	.5303267E+04	.6026104E+04	-.9935590E+03	
2	11.077	21.734	6.784	-.3890476E+04	.4724014E+04	-.2709929E+04	
3	17.252	17.252	6.784	-.2222884E+05	-.2869814E+04	.2869814E+04	
4	21.734	11.077	6.784	-.1225842E+05	-.1195323E+05	.4931847E+04	
5	24.079	3.817	6.792	.1814905E+05	-.1078034E+05	.1006944E+04	
6	24.079	-3.817	6.792	.2612271E+05	-.7440202E+04	-.1837315E+04	
7	21.734	-11.077	6.784	.1854743E+05	-.4487374E+04	-.3421876E+04	
8	17.252	-17.252	6.784	.3291277E+04	-.3650137E+04	-.3650137E+04	
9	11.077	-21.734	6.784	-.1193848E+05	-.4724014E+04	-.2709929E+04	
10	3.817	-24.079	6.792	-.2113222E+05	-.6026104E+04	-.9835590E+03	
11	-3.817	-24.079	6.792	-.2113222E+05	-.6026104E+04	.9835590E+03	
12	-11.077	-21.734	6.784	-.1193848E+05	-.4724014E+04	.2709929E+04	
13	-17.252	-17.252	6.784	.3291277E+04	-.3650137E+04	.3650137E+04	
14	-21.734	-11.077	6.784	.1854743E+05	-.4487374E+04	.3421876E+04	
15	-24.079	-3.817	6.792	.2612271E+05	-.7440202E+04	.1837315E+04	
16	-24.079	3.817	6.792	.1814905E+05	-.1078034E+05	-.1006944E+04	
17	-21.734	11.077	6.784	-.1225842E+05	-.1195323E+05	-.4931847E+04	
18	-17.252	17.252	6.784	-.2222884E+05	-.2869814E+04	-.2869814E+04	
19	-11.077	21.734	6.784	-.3890476E+04	.4724014E+04	.2709929E+04	
20	-3.817	24.079	6.792	.5303267E+04	.6026104E+04	.9835590E+03	

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).





LOAD SET = 9

CUT	YRAP	ZRAP	DELS	MOMENT	AXIAL	SHEAR
1	3.817	24.079	6.792	-.2056864F+05	-.2337215E+05	.3814719E+04
2	11.077	21.734	6.784	.1508915F+05	-.1832202F+05	.1051042F+05
3	17.252	17.252	6.784	.8621437F+05	.1113053E+05	-.1113053F+05
4	21.734	11.077	6.784	.4754408E+05	.4636040F+05	-.1912809E+05
5	24.079	3.817	6.792	-.7039080F+05	.4181139E+05	-.3905416F+04
6	24.079	-3.817	6.792	-.1013165F+06	.2885671F+05	.7126000E+04
7	21.734	-11.077	6.784	-.7193591E+05	.1740421E+05	.1327169E+05
8	17.252	-17.252	6.784	-.1276517E+05	.1415700E+05	.1415700E+05
9	11.077	-21.734	6.784	.4630321E+05	.1832202E+05	.1051042E+05
10	3.817	-24.079	6.792	.8196100F+05	.2337215E+05	.3814719E+04
11	-3.817	-24.079	6.792	.8196100F+05	.2337215E+05	-.3914719F+04
12	-11.077	-21.734	6.784	.4630321E+05	.1832202E+05	-.1051042F+05
13	-17.252	-17.252	6.784	-.1276517E+05	.1415700E+05	-.1415700E+05
14	-21.734	-11.077	6.784	-.7193591F+05	.1740421F+05	-.1327169E+05
15	-24.079	-3.817	6.792	-.1013165E+06	.2885671F+05	-.7126000E+04
16	-24.079	3.817	6.792	-.7039080F+05	.4181139F+05	.3905416E+04
17	-21.734	11.077	6.784	.4754408F+05	.4636040F+05	.1912809E+05
18	-17.252	17.252	6.784	.8621437F+05	.1113053E+05	.1113053E+05
19	-11.077	21.734	6.784	.1508915E+05	-.1832202E+05	-.1051042E+05
20	-3.817	24.079	6.792	-.2056864F+05	-.2337215E+05	-.3814719E+04

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

LOAD SET = 10

CUT	YBAR	ZRAP	DELS	MOMENT	AXIAL	SHEAR
1	3.817	24.079	6.792	-.3641323E+06	.1866516E+05	-.9679277E+05
2	11.077	21.734	6.784	-.1060509E+07	.6094903E+05	-.9146281F+05
3	17.252	17.252	6.794	-.2660957E+06	.7947595E+05	-.7947595E+05
4	21.734	11.077	6.784	.6497548E+06	.8246831E+05	-.5606301E+05
5	24.079	3.817	6.792	.2817340E+06	.6808807E+05	-.3664116E+05
6	24.079	-3.817	6.792	.4261853E+05	.4359407E+05	-.1933389E+05
7	21.734	-11.077	6.784	-.8264890E+05	.2040889E+05	-.4703047E+04
8	17.252	-17.252	6.784	-.1156051E+06	.6128155E+04	.6128154E+04
9	11.077	-21.734	6.784	-.8381607E+05	.1865595E+04	.1270898E+05
10	3.817	-24.079	6.792	-.1701539E+05	.3899493E+04	.1496299E+05
11	-3.817	-24.079	6.792	.5525033E+05	.7003655E+04	.1318342E+05
12	-11.077	-21.734	6.784	.1054166E+06	.6681657E+04	.7805847E+04
13	-17.252	-17.252	6.784	.1096502E+06	.4761091E+03	-.4761098E+03
14	-21.734	-11.077	6.784	.4909067E+05	-.1228980E+05	-.1089432E+05
15	-24.079	-3.817	6.792	-.8988287E+05	-.3013236E+05	-.2265818E+05
16	-24.079	3.817	6.792	-.3145714E+06	-.4858299E+05	-.3481927E+05
17	-21.734	11.077	6.784	-.6275754E+06	-.6084111E+05	-.4713972E+05
18	-17.252	17.252	6.784	.3063149E+06	-.7428354E+05	-.7428354E+05
19	-11.077	21.734	6.784	.1067548E+07	-.6949629E+05	-.9636594E+05
20	-3.817	24.079	6.792	.3545370E+06	-.2956831E+05	-.9857234E+05

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

LOAD SET = 11

CUT	YRPR	ZRPR	NELS	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	-.3864343F+06	.1690264E+05	-.1013961E+06
2	11.077	21.734	6.784	-.1116475F+07	.6228618E+05	-.9507077E+05
3	17.252	17.252	6.784	-.2749630F+06	.8481805F+05	-.8481805E+05
4	21.734	11.077	6.784	.6840114F+06	.9183533E+05	-.6058372E+05
5	24.079	3.817	6.792	.2864549F+06	.7611311E+05	-.3836892E+05
6	21.079	-3.817	6.792	.3450914F+05	.4880762E+05	-.1900940E+05
7	21.734	-11.077	6.784	-.9157266F+05	.2322528E+05	-.3136499E+04
8	17.252	-17.252	6.784	-.1184846F+06	.8084106E+04	.8084106E+04
9	11.077	-21.734	6.784	-.7881123F+05	.4300074F+04	.1432403E+05
10	3.817	-24.079	6.792	-.6292348F+04	.7079365E+04	.1573039F+05
11	-3.817	-24.079	6.792	.6712113E+05	.1026668E+05	.1289923F+05
12	-11.077	-21.734	6.784	.1131760F+06	.9297928E+04	.6523543F+04
13	-17.252	-17.252	6.784	.1090107E+06	.2422755E+04	-.2422756E+04
14	-21.734	-11.077	6.784	.3818417F+05	-.1030844E+05	-.1298632F+05
15	-24.079	-3.817	6.792	-.1097030F+06	-.2739111E+05	-.2429808E+05
16	-24.079	3.817	6.792	-.3386967E+06	-.4508206E+05	-.3547045E+05
17	-21.734	11.077	6.784	-.6487258F+06	-.5742815E+05	-.4638748F+05
18	-17.252	17.252	6.784	.3389485E+06	-.7655734E+05	-.7655733E+05
19	-11.077	21.734	6.784	.1127673F+07	-.7588419E+05	-.1028713E+06
20	-3.817	24.079	6.792	.3711689E+06	-.3424868F+05	-.1042272E+06

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

LOAD SET = 12

CUT	YBAR	ZBAR	DELTA	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	-1608642F+05	-1827901F+05	.2983434F+04
2	11.077	21.734	6.784	.1180100F+05	-1432937F+05	.8220041E+04
3	17.252	17.252	6.784	.6742696F+05	.8705019E+04	-.8705018E+04
4	21.734	11.077	6.784	.3718351F+05	.3625777F+05	-.1495979E+05
5	24.079	3.817	6.792	-.5505158F+05	.3270006E+05	-.3054367E+04
6	24.079	-3.817	6.792	-.7923814E+05	.2256840E+05	.5573137E+04
7	21.734	-11.077	6.784	-.5625999F+05	.1361157E+05	.1037959E+05
8	17.252	-17.252	6.784	-.9983444F+04	.1107198E+05	.1107198E+05
9	11.077	-21.734	6.784	.3621304F+05	.1432937E+05	.8220041E+04
10	3.817	-24.079	6.792	.6410047F+05	.1827901E+05	.2983434F+04
11	-3.817	-24.079	6.792	.6410047F+05	.1827901E+05	-.2983434F+04
12	-11.077	-21.734	6.784	.3621304F+05	.1432937E+05	-.8220041E+04
13	-17.252	-17.252	6.784	-.9983444F+04	.1107198E+05	-.1107198E+05
14	-21.734	-11.077	6.784	-.5625999F+05	.1361157E+05	-.1037959F+05
15	-24.079	-3.817	6.792	-.7923814E+05	.2256840E+05	-.5573137E+04
16	-24.079	3.817	6.792	-.5505158E+05	.3270006E+05	.3054367E+04
17	-21.734	11.077	6.784	.3718351F+05	.3625777E+05	.1495979E+05
18	-17.252	17.252	6.784	.6742696F+05	.8705019E+04	.8705018E+04
19	-11.077	21.734	6.784	.1180100F+05	-1432937F+05	-.8220041E+04
20	-3.817	24.079	6.792	-1608642F+05	-1827901E+05	-.2983434F+04

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

LOAD SET = 13

CUT	YRAO	ZPAR	NELS	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	-.2403252E+05	-.2730816E+05	.4457140E+04
2	11.077	21.734	6.784	.1763026E+05	-.2140755E+05	.1228044E+05
3	17.252	17.252	6.784	.1007334E+06	.1300497E+05	-.1300497E+05
4	21.734	11.077	6.784	.5555078E+05	.5416776E+05	-.2234938E+05
5	24.079	3.817	6.792	-.8224502E+05	.4885267E+05	-.4563111E+04
6	24.079	-3.817	6.792	-.1183788E+06	.3371635E+05	.8326060E+04
7	21.734	-11.077	6.784	-.8405034E+05	.2033518E+05	.1550673E+05
8	17.252	-17.252	6.784	-.1491489E+05	.1654112E+05	.1654112E+05
9	11.077	-21.734	6.784	.5410094E+05	.2140755E+05	.1228044E+05
10	3.817	-24.079	6.792	.9576372E+05	.2730816E+05	.4457140E+04
11	-3.817	-24.079	6.792	.9576372E+05	.2730816E+05	-.4457140E+04
12	-11.077	-21.734	6.784	.5410094E+05	.2140755E+05	-.1228044E+05
13	-17.252	-17.252	6.784	-.1491489E+05	.1654112E+05	-.1654112E+05
14	-21.734	-11.077	6.784	-.8405034E+05	.2033518E+05	-.1550673E+05
15	-24.079	-3.817	6.792	-.1183788E+06	.3371635E+05	-.8326060E+04
16	-24.079	3.817	6.792	-.8224502E+05	.4885267E+05	.4563111E+04
17	-21.734	11.077	6.784	.5555078E+05	.5416776E+05	.2234938E+05
18	-17.252	17.252	6.784	.1007334E+06	.1300497E+05	.1300497E+05
19	-11.077	21.734	6.784	.1763026E+05	-.2140755E+05	-.1228044E+05
20	-3.817	24.079	6.792	-.2403252E+05	-.2730816E+05	-.4457140E+04

Figure B-12. Sample output from FRMLD of frame coordinates and internal loads (IP(76)) (cont).

CUT	YEAR	ZBAR	NELS	MOMENT	AXIAL	SHFAR
1	3.817	24.079	6.792	-.6003473E+04	-.6821748E+04	.1113421E+04
2	11.077	21.734	6.784	.4404147E+04	-.5347739E+04	.3067729E+04
3	17.252	17.252	6.784	.2516382E+05	.3248724E+04	-.3248723E+04
4	21.734	11.077	6.784	.1387693E+05	.1353144E+05	-.5583013E+04
5	24.079	3.817	6.792	-.2054532E+05	.1220370E+05	-.1139893E+04
6	24.079	-3.817	6.792	-.2957177E+05	.8422553E+04	.2079902E+04
7	21.734	-11.077	6.784	-.2099630E+05	.5079855E+04	.3873677E+04
8	17.252	-17.252	6.784	-.3725833E+04	.4132075E+04	.4132075E+04
9	11.077	-21.734	6.784	.1351475E+05	.5347739E+04	.3067729E+04
10	3.817	-24.079	6.792	.2392237E+05	.6821748E+04	.1113421E+04
11	-3.817	-24.079	6.792	.2392237E+05	.6821748E+04	-.1113421E+04
12	-11.077	-21.734	6.784	.1351475E+05	.5347739E+04	-.3067729E+04
13	-17.252	-17.252	6.784	-.3725833E+04	.4132075E+04	-.4132075E+04
14	-21.734	-11.077	6.784	-.2099630E+05	.5079855E+04	-.3873677E+04
15	-24.079	-3.817	6.792	-.2957177E+05	.8422553E+04	-.2079902E+04
16	-24.079	3.817	6.792	-.2054532E+05	.1220370E+05	.1139893E+04
17	-21.734	11.077	6.784	.1387693E+05	.1353144E+05	.5583013E+04
18	-17.252	17.252	6.784	.2516382E+05	.3248724E+04	.3248723E+04
19	-11.077	21.734	6.784	.4404147E+04	-.5347739E+04	-.3067729E+04
20	-3.817	24.079	6.792	-.6003473E+04	-.6821748E+04	-.1113421E+04

860

CUT	T-WFR	T-CAP	R-CAP
1	.360	.266	4.281
2	.337	.567	6.000
3	.301	.293	4.712
4	.215	.417	6.000
5	.147	.289	4.646
6	.117	.128	3.181
7	.112	.162	2.600
8	.114	.152	2.446
9	.106	.145	2.335
10	.109	.178	2.862
11	.103	.178	2.862
12	.104	.151	2.432
13	.114	.137	2.208
14	.112	.161	2.586
15	.126	.198	3.181
16	.143	.277	4.458
17	.182	.365	5.867
18	.271	.304	4.883
19	.365	.589	6.000
20	.370	.277	4.458

Figure B-13. Sample output from SFOAWE of frame sizing details (IP(76)).



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*** MAJOR FRAMES ***

SEGMENT   STATION   WT CAP   WT WEA   WT STIFF   FRAME WT
  3.0      351.0      101.5      38.9      27.3      167.6
 12.0      998.0      1017.2     256.5     258.1     1531.8
 13.0     1058.0       53.5      31.3      15.6      100.4
  7.0      734.0      238.4      67.1      61.9      367.5
 10.0      958.0      549.4     145.8     143.3     838.5
 17.0     1641.0       54.5      22.3      15.3       92.2
 19.0     1728.0       36.0      17.2      13.0       66.2

```

Figure B-14. Sample output from FFRME of major frame detail weights (IP(77)).



T-REGION

\*\*\* BREAKPOINT OUTPUT - SUBROUTINE FUSSEL \*\*\*SECTION 19

1	.7500	.1450	.1450	.1450
6	55480.0000	24.1264	2299.5664	2299.5664
11	37.9264	247543.6345	-206539.0387	3945888.9515
16	37.9264	.0000	1.3333	6425.5926
21	196949.7268	37.9264	6.3211	12.6421
26	994.4712	0.0000	794.2524	0.0000
31	82.3601	0.0000	.0000	0.0000
36	2.1500	17.0746	.9772	.3235
41	.0500	48.2524	17.3709	.3600
46	1.4514	.2213	128947.6381	0.0000
51	38828.3202	.7243	.0468	4.7179
56	.1116	.7247	.5606	.4197
61	.0001	42.7107	0.0000	37.9264
66	0.0000	0.0000	0.0000	0.0000
71	0.0000	0.0000	0.0000	0.0000
76	0.0000	0.0000	0.0000	0.0000
81	0.0000	0.0000	0.0000	0.0000
86	0.0000	0.0000	0.0000	0.0000
91	0.0000	0.0000	0.0000	0.0000
96	0.0000	0.0000	0.0000	0.0000
101	6.0000	25.2243	0.0000	0.0000
106	18089.4241	4020.3286	4020.3286	48.2526
111	2929.7047	2929.7047	558.0004	8040.6573
116	5512.0854	0.0000	0.0000	568.0004
121	-127745.1255	82009.2016	4290.2860	96.7521
126	7.0000	931.6500	1.5000	-88.2069
131	9.0000	931.6500	1.5000	2.8026
136	555062.9042	0.0000	5345335.1961	-8.8026
141	56.5100	.8308	.9438	0.0000
146	10382.0404	15.4206	6.0000	4152816.1448
151	0.0000	.0325	.0325	6.0000
156	.0325	0.0000	0.0000	0.0000
161	6.0000	.1352	3945888.9515	0.0000
166	0.0000	.1450	0.0000	48.2526
171	0.0000	0.0000	0.0000	0.0000
176	0.0000	0.0000	0.0000	0.0000
181	64.2694	155.8117	0.0000	0.0000
186	20980.9045	65000.0000	10500010.5000	0.0000
191	.1477	0.0000	0.0000	7513.5952
196	7.0000	0.0000	0.0000	0.0000

Figure B-16. Sample output from FUSSEL of scratch region (IP(79)).

VEHICLE TYPE	32.0
NUMBER OF CUTS	19.0
SHAPE CODE	1.0
CONSTRUCTION TYPE	2.0
COVER DESIGN INDICATOR	0.0
COVER MATERIAL NUMBER	4.0
LONGERON MATERIAL NUMBER	5.0
MAJOR FRAME MATERIAL NUMBER	5.0
MINOR FRAME MATERIAL NUMBER	4.0
JOINT CODE	10.0
NUMBER OF PRIMARY LONGERONS	0.0
NUMBER OF SECONDARY LONGERONS	4.0
GENERAL DEPTH RATIO - LONGS	0.0
NUMBER OF SHROUD RAILS	0.0
STRINGER SPACING	6.0
GENERAL FRAME DEPTH	6.0
GENERAL FRAME SPACING	1020.0
COVER INDEX FACTOR	1.2200
LONGERON INDEX FACTOR	1.1800
JIF INDEX FACTOR	1.0000
MINOR FRAME INDEX FACTOR	1.2500
MAJOR FRAME INDEX FACTOR	1.1000
BULKHEAD INDEX FACTOR	1.1000
LOCAL PANEL FLUTTER DATA	
MACH NUMBER	0.00
ALTITUDE	0.0
DYNAMIC PRESSURE	0.0
COVER MODULUS OF ELASTICITY	0.
FUNCTION OF MACH NUMBER	0.0000
ADDITIONAL DESIGN DATA	
MAXIMUM SEA LEVEL SPEED	531.3
MAXIMUM DYNAMIC PRESSURE	8.60
LIMIT CARIN PRESSURE	

Figure B-17. Sample output from SPRINT of construction indicators (IP(80)).

\*\*\* BASIC VEHICLE DATA \*\*\*

NUMBER OF CREW MEMBERS 4.0  
 NUMBER OF ENGINES 0.0  
 WING CHORD - SIDE OF FUSELAGE 302.9  
 WING APEX 648.8

	INDICATOR	X-COORDINATE	Y-SIDE FUS	Z-SIDE FUS
WING DATA	0.0		77.7	284.0
FRONT SPAR		734.0		
REAR SPAR		958.0		
INT. SPAR		0.0		
HORIZONTAL TAIL DATA	0.0		0.0	0.0
FRONT SPAR		0.0		
REAR SPAR		0.0		
VERTICAL TAIL DATA	1.0		0.0	286.0
FRONT SPAR		1641.0		
REAR SPAR		1728.0		
NACFLIF DATA			0.0	0.0
FORWARD SUPPORT		0.0		
AFT SUPPORT		0.0		
STORES AND OTHERS			0.0	0.0
FORWARD SUPPORT		0.0		
AFT SUPPORT		0.0		
NOSF GEAR DATA			28.0	130.0
GROUND LOCATION		354.7	28.0	96.0
TRUNNION		351.0		
DRAG STRUT		0.0		
MAIN GEAR DATA			64.5	144.7
GROUND LOCATION		991.8	105.0	96.0
TRUNNION		998.0		
DRAG STRUT		1058.0		

Figure B-18. Sample output from SPRINT of basic vehicle geometry data (IP(80)).

## \*\*\* SECONDARY STRUCTURE - INPUT DATA SET \*\*\*

INDICATORS AND C.G. DATA, SCOT REGION		
1	0.0000	1.0000
6	1.0000	0.0000
11	0.0000	1.0000
16	0.0000	0.0000
21	1.0000	0.0000
26	1.0000	1.0000
31	0.0000	0.0000
36	1.0000	1.0000
41	0.0000	0.0000
46	0.0000	0.0000
51	0.0000	0.0000
56	0.0000	0.0000
61	0.0000	0.0000
66	0.0000	0.0000
71	0.0000	0.0000
76	0.0000	0.0000
81	0.0000	0.0000
86	0.0000	0.0000
91	0.0000	0.0000
96	0.0000	0.0000

GEOMETRIC DEFINITIONS, SCOT REGION		
1	0.0000	3.0000
6	51.0000	0.0000
11	6.0000	183.0000
16	0.0000	0.0000
21	0.0000	395.3000
26	0.0000	108.5000
31	127.0000	122.0000
36	0.0000	6.0500
41	4.0000	2.0000
46	12.2000	0.0000
51	0.0000	0.0000
56	841.0000	0.0000
61	0.0000	0.0000
66	0.0000	0.0000
71	0.0000	0.0000
76	0.0000	0.0000

Figure B-19. Sample output from SPRINT of secondary structure indicator and geometry data (IP(80)).

\*\*\* SHELL GEOMETRY - INPUT DATA SET \*\*\*

CUT	STATION	FRAME SPACING	FRAME DEPTH	LONGERON DEPTH RATIO	DECK DEPTH	CUTOUT UPPER	CUTOUT LOWER	CUTOUT SIDE	SHROUD RADIUS
1	272.0	0.0	0.0	0.0000	.5000	0.0	-56.0	0.0	0.0
2	349.0	0.0	0.0	0.0000	.5000	0.0	56.0	0.0	0.0
3	353.0	0.0	0.0	0.0000	.5000	0.0	0.0	0.0	0.0
4	452.0	0.0	0.0	0.0000	.5000	0.0	0.0	0.0	0.0
5	600.0	0.0	0.0	0.0000	0.0000	0.0	0.0	0.0	0.0
6	732.0	0.0	0.0	0.0000	0.0000	0.0	0.0	0.0	0.0
7	736.0	0.0	0.0	0.0000	.8235	-1.0	0.0	0.0	0.0
8	846.0	0.0	0.0	0.0000	.8235	1.0	0.0	0.0	0.0
9	956.0	0.0	0.0	0.0000	.8235	1.0	0.0	0.0	0.0
10	960.0	0.0	0.0	0.0000	0.0000	0.0	0.0	0.0	0.0
11	996.0	0.0	0.0	0.0000	0.0000	0.0	0.0	0.0	0.0
12	1000.0	0.0	0.0	0.0000	0.0000	0.0	0.0	0.0	0.0
13	1142.0	0.0	0.0	0.0000	0.0000	0.0	0.0	0.0	0.0
14	1202.0	0.0	0.0	0.0000	.6840	0.0	-1.0	0.0	0.0
15	1308.0	0.0	0.0	0.0000	.5950	0.0	1.0	0.0	0.0
16	1639.0	0.0	0.0	0.0000	.4460	0.0	1.0	0.0	0.0
17	1643.0	0.0	0.0	0.0000	.4460	0.0	1.0	0.0	0.0
18	1726.0	0.0	0.0	0.0000	.3600	0.0	1.0	0.0	0.0
19	1730.0	0.0	0.0	0.0000	.3600	0.0	1.0	0.0	0.0

## NOTES:

FRAME SPACING \* 1000 INDICATES FIXED FRAME SPACING.

NEGATIVE VALUE FOR LONGERON DEPTH INDICATES ANGULAR

LOCATION OF LONGERONS IN RADIAN.

VALUE OF 1 DESIGNATES THE REMOVAL OF SECTOR.

NEGATIVE VALUE FOR CUTOUTS AND SHROUD RADIUS DESIGNATES FORWARD EDGE.

Figure B-20. Sample output from SPRINT of shell geometry data (IP(80)).

CUT	STATION	NUMBER RFAMS	INDICATOR BULKHEAD	PRESSURE	DENSITY FUEL	ACOUSTIC LEVEL-DR	STIFFNESS FI-VFPT	STIFFNESS EI-SIDE	GJ
1	272.0	0.0	1.0	-8.6	0.0000	0.0	0.0	0.0	0.0
2	249.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
3	353.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
4	452.0	0.0	1.0	-8.6	0.0000	0.0	0.0	0.0	0.0
5	600.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
6	732.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
7	736.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
8	946.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
9	956.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
10	960.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
11	996.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
12	1000.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
13	1142.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
14	1202.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
15	1398.0	0.0	0.0	-8.6	0.0000	0.0	0.0	0.0	0.0
16	1639.0	0.0	1.0	0.0	0.0000	0.0	0.0	0.0	0.0
17	1643.0	0.0	0.0	0.0	0.0000	0.0	0.0	0.0	0.0
18	1726.0	0.0	0.0	0.0	0.0000	0.0	0.0	0.0	0.0
19	1730.0	0.0	0.0	0.0	0.0000	0.0	0.0	0.0	0.0

Figure B-21. Sample output from SPRINT of local shell criteria data (IP(80)).



\*\*\* SHELL GEOMETRY - SECTION DATA \*\*\*

OUT	STA.	70	RII	RI	RS	RCU	RCL	RCS	PEPT.	NO	WO	RO
1	272.0	200.0	66.7	66.7	66.7	42.5	42.5	42.5	266.7	.0	.0	42.4
2	240.0	200.0	117.4	117.4	117.4	74.9	74.9	74.9	469.8	.1	.1	74.7
3	252.0	200.0	114.5	114.5	114.5	75.5	75.5	75.5	474.1	.1	.1	75.4
4	252.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
5	600.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
6	732.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
7	736.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
8	846.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
9	956.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
10	960.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
11	996.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
12	1000.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
13	1142.0	200.0	133.5	133.5	133.5	85.0	85.0	85.0	534.0	0.0	0.0	85.0
14	1202.0	223.0	132.1	132.1	132.1	84.2	84.2	84.2	528.5	.1	.1	84.0
15	1398.0	239.7	124.6	124.6	124.6	79.4	79.4	79.4	498.6	.0	.0	79.3
16	1630.0	259.4	71.2	71.2	71.2	45.4	45.4	45.4	284.6	.1	.1	45.2
17	1642.0	259.7	70.0	70.0	70.0	44.7	44.7	44.7	280.1	.1	.1	44.5
18	1726.0	264.7	39.7	39.7	39.7	25.3	25.3	25.3	158.6	.1	.1	25.2
19	1730.0	264.9	37.9	37.9	37.9	24.2	24.2	24.2	151.7	.1	.1	24.1
20	1817.9	270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure B-22. Sample output from SPRINT of shell geometry data (IP(80)).

\*\*\* SEGMENT DATA - GEOMETRY AND UNIT INERTIAS \*\*\*

SEG	AREA	VOLUME	IOXX	IOYY	IOZZ
1	258.1	74404.6	540.6	335.2	335.2
2	310.5	852016.2	1712.0	1350.1	1350.1
3	351.0	70894.8	2811.3	1407.0	1407.0
4	402.5	2003403.7	3212.6	2423.0	2423.0
5	526.0	3359415.0	3611.5	3631.1	3631.1
6	666.0	2995343.1	3611.5	3257.8	3257.8
7	734.0	90768.0	3611.5	1807.1	1807.1
8	791.0	2496119.2	3611.5	2814.1	2814.1
9	901.0	2496119.2	3611.5	2814.1	2814.1
10	958.0	90768.0	3611.5	1807.1	1807.1
11	978.0	816911.8	3611.5	1913.8	1913.8
12	998.0	90768.0	3611.5	1807.1	1807.1
13	1071.0	3222263.0	3611.5	3486.1	3486.1
14	1217.0	3368733.9	3566.4	3658.2	3658.2
15	1345.0	2225189.0	3330.0	2601.3	2601.3
16	1518.5	3014428.4	1936.6	5808.4	5808.4
17	1641.0	253378.9	1004.0	503.4	503.4
18	1684.5	325909.4	605.0	476.6	476.6
19	1728.0	7664.2	302.0	152.4	152.4
20	1759.0	53661.3	174.0	377.2	377.2
TOTAL	716077.7	27683649.6			

Figure B-23. Sample output from SPRINT of shell geometry and unit inertia data (IP(80)).

\*\*\* SHELL GEOMETRY - SECTION DATA \*\*\*

CUT	STATION	CROSS SECTION: AREA-TOPGUS				DEFINITION				DEFINITION-DECK				DEFINITION-EFFECT				DEFINITION-EFFECT			
		TOTAL	NET FWD	NET AFT	NET	FORWARD	AFT	FORWARD	AFT	FORWARD	AFT	FORWARD	AFT	FORWARD	AFT	FORWARD	AFT	FORWARD	AFT	FORWARD	AFT
1	272.0	5660.7	5660.7	2530.3	2530.3	266.7	218.2	36.5	36.5	84.9	84.9	42.4	42.4	84.9	84.9	42.4	42.4	84.9	84.9	42.4	42.4
2	349.0	17563.7	4781.8	17563.7	17563.7	346.6	460.8	149.5	149.5	149.5	149.5	74.7	74.7	149.5	149.5	74.7	74.7	149.5	149.5	74.7	74.7
3	353.0	17484.2	17484.2	17484.2	17484.2	474.1	474.1	150.0	150.0	150.0	150.0	75.4	75.4	150.0	150.0	75.4	75.4	150.0	150.0	75.4	75.4
4	452.0	22692.1	22692.0	22692.0	22692.0	534.0	534.0	170.0	170.0	170.0	170.0	85.0	85.0	170.0	170.0	85.0	85.0	170.0	170.0	85.0	85.0
5	600.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	0.0	0.0	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
6	732.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	0.0	0.0	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
7	736.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	170.0	170.0	170.0	170.0	140.0	140.0	170.0	170.0	140.0	140.0	170.0	170.0	140.0	140.0
8	846.0	22692.0	19492.5	19492.5	19492.5	516.2	516.2	129.6	129.6	129.6	129.6	140.0	140.0	170.0	170.0	140.0	140.0	170.0	170.0	140.0	140.0
9	956.0	22692.0	19492.5	22692.0	22692.0	516.2	534.0	129.6	129.6	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
10	966.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	0.0	0.0	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
11	996.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	0.0	0.0	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
12	1000.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	0.0	0.0	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
13	1142.0	22692.0	22692.0	22692.0	22692.0	534.0	534.0	0.0	0.0	0.0	0.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0	170.0
14	1292.0	22225.3	22225.3	6024.4	6024.4	522.5	357.3	164.2	164.2	156.4	156.4	115.0	115.0	170.0	170.0	115.0	115.0	168.2	168.2	115.0	115.0
15	1392.1	12782.1	7513.6	7513.6	7513.6	374.9	374.9	155.3	155.3	155.9	155.9	64.3	64.3	155.9	155.9	64.3	64.3	155.9	155.9	64.3	64.3
16	1633.0	6447.2	3665.7	3665.7	3665.7	242.2	242.2	90.0	90.0	90.0	90.0	50.2	50.2	90.0	90.0	50.2	50.2	90.0	90.0	50.2	50.2
17	1642.0	6242.4	3549.4	3549.4	3549.4	238.3	238.3	88.6	88.6	88.6	88.6	49.4	49.4	89.1	89.1	49.4	49.4	89.1	89.1	49.4	49.4
18	1726.0	2101.9	1352.7	1352.7	1352.7	142.1	142.1	48.5	48.5	48.5	48.5	32.3	32.3	50.4	50.4	32.3	32.3	50.4	50.4	32.3	32.3
19	1730.0	1831.4	1237.5	1237.5	1237.5	135.9	135.9	46.6	46.6	46.6	46.6	30.9	30.9	48.3	48.3	30.9	30.9	48.3	48.3	30.9	30.9

Figure B-24. Sample output from SPRINT of shell geometry data (IP(80)).

\*\*\* MISCELLANEOUS SHELL DATA \*\*\*

YOUNG'S MODULUS - COVER 10700000.0  
LONGERONS 10500000.0

CUT	STATION	PANEL SIZE		CUTOFF DATA		APPARENT CUTOFF		BENDING STIFFNESS	
		UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	VERTICAL	SIDE
1	272.00	66.68	66.68	0.00	-56.00	0.00	56.00	.9506187F+11	.1196996F+12
2	349.00	117.45	117.45	0.00	56.00	0.00	56.00	.5641325F+12	.6225611F+12
3	353.00	114.52	114.52	0.00	0.00	0.00	52.00	.5407377F+12	.6346165F+12
4	452.00	133.50	133.50	0.00	0.00	0.00	0.00	.9115351F+12	.9005311F+12
5	600.00	133.50	133.50	0.00	0.00	0.00	0.00	.9115351F+12	.9005311F+12
6	732.00	133.50	133.50	0.00	0.00	129.50	0.00	.4628906F+12	.9087805F+12
7	736.00	133.50	133.50	-1.00	0.00	133.50	0.00	.4890404F+12	.1207392F+13
8	846.00	133.50	133.50	1.00	0.00	133.50	0.00	.1032555F+13	.1587693F+13
9	956.00	133.50	133.50	1.00	0.00	133.50	0.00	.1810295F+13	.2124194F+13
10	960.00	133.50	133.50	0.00	0.00	129.50	0.00	.1816726F+13	.2339146F+13
11	996.00	133.50	133.50	0.00	0.00	93.50	0.00	.1669104F+13	.1A07212F+13
12	1000.00	133.50	133.50	0.00	0.00	89.50	0.00	.1653275F+13	.1177887F+13
13	1142.00	133.50	133.50	0.00	0.00	0.00	0.00	.1201051F+13	.963025F+12
14	1202.00	132.12	132.12	0.00	-1.00	0.00	132.12	.1069401F+13	.1221212F+13
15	1398.00	124.65	124.65	0.00	1.00	0.00	124.65	.8516378F+12	.9874437F+12
16	1630.00	71.16	71.16	0.00	1.00	0.00	71.16	.1719001F+12	.1976057F+12
17	1643.00	70.02	70.02	0.00	1.00	0.00	70.02	.1656226F+12	.2095331F+12
18	1726.00	39.65	39.65	0.00	1.00	0.00	39.65	.2342122F+11	.4587255F+11
19	1730.00	37.93	37.93	0.00	1.00	0.00	37.93	.1728719F+11	.1982304F+11

Figure B-25. Sample output from SPRINT of geometry and stiffness data (IP(80)).

\*\*\* SECTION DATA - SHELL ELEMENTS \*\*\*

CUT	STATION	CPIT.	FRAME	SPACING	IBPFP	BASIC	THICKNESS	LAND	REINFORCEMENTS	BASIC	TORSION	AFT
							SIDE	LOWFR	IBPFP	SIDE	LOWFR	
1	272.0	4	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
2	349.0	4	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
3	353.0	14	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
4	452.0	4	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
5	600.0	4	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
6	732.0	4	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
7	736.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
8	846.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
9	956.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
10	960.0	14	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
11	996.0	14	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
12	1000.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
13	1142.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
14	1292.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
15	1398.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
16	1639.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
17	1643.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
18	1726.0	2	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000
19	1730.0	7	20.00	.0500	.0500	.0500	.0500	.0500	.0500	.0500	.0500	0.0000

Figure B-26. Sample output from SPRINT of cover sizing data (IP(80)).

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\*\*\* SECTION DATA - SHELL ELEMENTS \*\*\*

CUT	STATION	CRITICAL DOWN	UP	CONC.	LONG. STRING. DEPTH/S-AGE NUMBER	UPPER	APFA - LONGERON/STRINGER		LONG STIFF	ARFA - LONG C/O	
							LOWER	SIDE		UPPER	LOWER
1	272.0	9	7	7	6.00	.145	.145	.145	.145	0.000	.145
2	349.0	4	7	7	6.00	.145	.145	.145	.145	0.000	.145
3	353.0	4	7	7	6.00	.145	.145	.145	.145	0.000	.145
4	452.0	4	14	14	6.00	.145	.145	.145	.145	0.000	.145
5	600.0	4	14	14	6.00	.145	.145	.145	.145	0.000	.145
6	732.0	4	14	14	6.00	.145	.145	.145	.145	1.937	0.000
7	736.0	4	3	3	6.00	.145	.145	.145	.145	2.044	0.000
8	946.0	2	3	3	6.00	.357	.298	.212	.145	6.451	0.000
9	956.0	2	3	3	6.00	.637	.579	.235	.145	11.525	0.000
10	960.0	2	3	3	6.00	.618	.568	.240	.145	10.353	0.000
11	996.0	2	3	3	6.00	.681	.514	.291	.145	4.196	0.000
12	1000.0	2	3	3	6.00	.498	.539	.165	.145	4.039	0.000
13	1142.0	2	3	3	6.00	.145	.356	.145	.145	0.000	0.000
14	1232.0	2	3	3	6.00	.145	.285	.145	.145	0.000	5.123
15	1308.0	2	3	3	6.00	.145	.245	.145	.145	0.000	4.069
16	1639.0	2	6	6	6.00	.145	.306	.145	.145	0.000	2.996
17	1643.0	2	6	6	6.00	.145	.294	.135	.145	0.000	2.856
18	1726.0	2	3	3	6.00	.145	.145	.335	.145	0.000	.145
19	1730.0	7	4	4	6.00	.145	.145	.145	.145	0.000	.145

Figure B-27. Sample output from SPRINT of longeron/stringer sizing data (IP(80)).

SFC	STA	LENGTH	UPPER	COVER FILMENTS		TOTAL	MINOR FRAMES	JOINTS SPLICES	LONGITUDINAL PARTITIONS
				SIDE	LOWER				
1	254.1	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	310.5	77.0	43.7	87.3	17.1	144.1	63.0	18.2	42.2
3	351.0	4.0	2.0	5.8	2.0	11.6	4.2	1.4	3.2
4	402.5	90.0	75.9	152.7	76.9	307.4	111.0	37.5	83.7
5	526.0	144.0	121.7	242.5	121.7	484.9	175.7	59.2	132.5
6	646.0	132.0	102.6	217.1	108.6	434.3	156.7	55.4	118.2
7	734.0	4.0	3.3	6.7	3.3	12.3	6.8	1.8	4.0
8	791.0	110.0	0.0	186.4	90.5	276.9	244.6	48.1	104.3
9	901.0	110.0	0.0	192.7	90.5	284.2	251.1	64.9	107.1
10	958.0	4.0	3.3	8.9	3.3	15.4	10.3	3.7	5.1
11	978.0	36.0	29.6	93.7	29.6	152.9	101.3	31.2	50.8
12	998.0	4.0	3.3	3.6	3.3	15.1	9.0	2.9	4.6
13	1071.0	142.0	106.9	222.6	116.9	467.2	168.9	77.9	127.2
14	1217.0	150.0	122.7	245.5	122.7	490.9	177.2	73.3	133.6
15	1345.0	106.0	83.8	167.7	0.0	251.5	121.0	40.4	74.5
16	1518.5	241.0	145.4	290.7	0.0	436.1	209.9	70.2	129.2
17	1641.0	4.0	1.7	3.5	0.0	5.2	3.6	.9	1.8
18	1684.5	83.0	28.0	64.5	0.0	92.6	93.3	14.9	37.2
19	1728.0	4.0	1.0	2.3	0.0	3.3	2.8	.4	1.2
20	1759.3	87.9	10.6	21.3	10.6	42.6	15.4	5.4	11.6
TOTAL			903.3	2224.4	797.8	3035.5	1924.9	607.9	1172.1

Figure B-28. Sample output from SPRINT of shell detail weights (IP(80)).

SEC	STA	LENGTH	UPPER	STDF	LOWER	UPPER	LOWER	MISC	TOTAL
1	254.1	41.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	310.5	77.0	0.0	41.1	8.1	0.0	2.7	0.0	72.4
3	351.0	4.0	1.4	2.7	1.6	0.0	.1	0.0	5.6
4	402.5	90.0	26.2	72.3	36.2	0.0	1.7	0.0	146.4
5	526.0	144.0	67.3	114.6	57.3	0.0	0.0	0.0	229.2
6	665.0	132.0	61.1	102.2	51.1	30.7	0.0	0.0	235.1
7	734.0	4.0	1.5	3.8	1.5	1.9	0.0	0.0	8.8
8	791.0	110.0	0.0	124.8	65.1	112.1	0.0	0.0	302.0
9	901.0	110.0	0.0	128.6	128.8	237.3	0.0	0.0	494.6
10	958.0	4.0	6.7	5.4	6.1	10.5	0.0	0.0	28.7
11	978.0	36.0	52.8	54.0	52.0	62.8	0.0	0.0	221.6
12	998.0	4.0	5.2	4.6	5.6	4.0	0.0	0.0	19.4
13	1071.0	142.0	121.9	109.9	169.7	64.8	0.0	0.0	470.3
14	1217.0	150.0	57.8	115.5	127.7	0.0	0.0	0.0	393.2
15	1345.0	106.0	39.5	78.9	0.0	0.0	116.9	0.0	235.3
16	1518.5	241.0	64.4	136.8	0.0	0.0	204.3	0.0	409.6
17	1641.0	4.0	.8	1.9	0.0	0.0	2.8	0.0	5.5
18	1684.5	83.0	13.2	44.1	0.0	0.0	29.9	0.0	87.2
19	1724.0	4.0	.4	1.5	0.0	0.0	.1	0.0	2.1
20	1759.3	87.9	5.0	10.0	5.0	0.0	3.1	0.0	23.1
TOTAL			529.8	1152.8	715.5	524.1	453.9	0.0	3390.1

Figure B-29. Sample output from SPRINT of longeron/stringer detail weights (IP(80)).



\*\*\* BODY GROUP \*\*\*  
BASIC STRUCTURE

PULKHEADS AND FRAMES	351.00	167.6
	998.00	1531.8
	1058.00	100.4
	734.00	367.5
	958.00	838.5
	1641.00	92.2
	1728.00	66.2
	1314.47	402.1
	272.00	42.6
	452.00	526.9
	1398.00	141.7
MINOR FRAMES		1924.9
JOINTS, SPLICES AND FASTENERS		607.9
COVERING - UPPER BETWEEN LONGERONS		903.3
- SIDE BETWEEN LONGERONS		2234.4
- LOWER BETWEEN LONGERONS		797.8
COVERING LONGITUDINAL STIFFENERS - UPPER RETW. LONG.		539.8
- SIDE RETW. LONG.		1152.8
- LOWER RETW. LONG.		715.5
LONGERONS - UPPER		528.1
- LOWER		453.9
ENGINE DRAG		0.0
LONGITUDINAL PARTITIONS - (STRUCTURAL)		1172.1
FLOORING AND SUPPORTS - (BASIC STRUCTURE)		3421.1
FITTINGS		130.8
TOTAL - BASIC STRUCTURE		18859.8

Figure B-30. Sample output from SPRINT of basic structure weight summary.

\*\*\* BODY GROUP \*\*\*  
SECONDARY STRUCTURE

ENCLOSURES (EXCLUDING TURBOJET ENCLOSURES) CANOPY - PILOT	0.0
WINDSHIELD (EXCLUDING BULLET PROTECTION)	292.6
WINDOWS AND PORTS INCL. FRAMES	300.5
WINDOWS AND PORTS - CABIN	6.3
FLOORING AND SUPPORTS (SECONDARY STRUCTURE)	404.4
STAIRWAYS AND LADDERS (FIXED)	32.4
NOSE PADOME	96.3
SPEED BRAKES - STRUCTURE AND SUPPORTS	0.0
TOTAL SECONDARY STRUCTURE	1138.6

Figure B-31. Sample output from SPRINT of secondary structure weight summary.

\*\*\* BODY GROUP \*\*\*  
 SECONDARY STRUCTURE  
 (DOORS, PANELS AND MISCELLANEOUS)

	AREA-SQ.FT.	
DOORS AND FRAMES		
- MAIN GEAR	167.0	863.9
- NOSE GEAR	12.9	164.5
- AFT CARGO	385.3	1117.4
- AFT RAMP	108.5	1071.4
- PRESSURE	65.7	427.8
- HUMP	0.0	0.0
- GUN		0.0
- AMMO		0.0
- ESCAPE	24.2	471.9
- ESCAPE	14.5	185.0
- PARATROOP	42.4	466.4
- ENTRANCE	12.2	122.0
- ACCESS		113.3
PANELS (NON STRUCTURAL)		
- SPOILER DEFLECTOR		20.0
- MAIN GEAR PON	700.0	1181.4
WALKWAYS, STEPS, GRIPS		168.2
ANTI-SKID PROTECTION		58.9
FAIRING AND FILLETS		0.0
EXTERIOR FINISH		0.0
INTERIOR FINISH		248.6
TOTAL SECONDARY STRUCTURE (DOORS, PANELS, MISC.)		6680.6
TOTAL - BASIC STRUCTURE		18859.8
TOTAL SECONDARY STRUCTURE		1138.6
TOTAL - BODY GROUP		26679.0

Figure B-31. Sample output from SPRINT of secondary structure weight summary (concl).

\*\*\* BODY GROUP \*\*\*  
BALANCE DATA

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	WEIGHT	HOP17. ARM
BULKHEADS AND FRAMES	4277.47	937.20
JOINTS, SPLICES AND FASTENERS	607.94	977.38
WING FRAMES	1924.90	974.21
COVERING - UPPER	903.35	992.60
SIDE	2234.36	970.36
LOWER	797.78	824.63
LONGERONS AND LONGITUDINAL STIFFENERS	539.80	999.91
	1152.80	972.12
	715.47	920.73
	528.11	898.41
	453.87	1410.72
ENGINE DRAG	0.00	0.00
LONGITUDINAL PARTITIONS	1172.08	956.25
FLOORING AND SUPPORTS	3421.06	872.00
FITTINGS	130.76	1095.78
TOTAL BASIC STRUCTURE	18859.75	948.16

SECONDARY STRUCTURE

0.00	0.00
0.00	0.00
298.64	309.40
300.50	309.40
6.30	1020.00
404.43	385.30
32.45	442.80
96.32	319.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

TOTAL SECONDARY STRUCTURE

1138.64      344.90

Figure B-32. Sample output from SPRINT of body balance data.

\*\*\* BODY GROUP \*\*\*  
BALANCE DATA

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DOORS, PANELS AND MISCELLANEOUS	WEIGHT	HORIZ. ARM
	963.90	968.60
	164.50	353.80
	1117.37	1560.80
	0.00	0.00
	0.00	0.00
	0.00	0.00
	1071.36	1356.80
	0.00	0.00
	427.77	1411.00
	0.00	0.00
	0.00	0.00
	0.00	0.00
	471.90	810.90
	195.01	842.50
	466.40	1218.00
	20.00	1200.00
	122.00	468.00
	113.28	850.00
	0.00	0.00
	0.00	0.00
	0.00	0.00
	0.00	0.00
	0.00	0.00
	1191.40	971.80
	0.00	0.00
	0.00	0.00
	168.20	872.00
	58.87	872.00
	0.00	0.00
	248.64	882.40
TOTAL SECONDARY STRUCTURE (DOORS, PANELS, MISC.)	6680.60	1129.49
TOTAL - BODY GROUP	26678.99	967.82

END FUSELAGE

Figure B-32. Sample output from SPRINT of body balance data (concl).